6238

Bicentennial Edition

SINGER

CONGRATULATIONS

You are about to begin an adventure in creativity: You are going to sew! And, you are going to sew with one of the easiest to use machines ever made.

The following features have been included on your machine, promising rewarding hours of uncomplicated sewing pleasure:

- Clearly defined thread path, reducing the possibility of threading errors
- Electronic speed control, assuring smooth, even sewing
- Auto tension, requiring no adjustments for a majority of your sewing projects
- One-step pattern selection, eliminating complicated selection operation
- Wind-in-place bobbin, allowing you to wind the bobbin while it's in the machine.

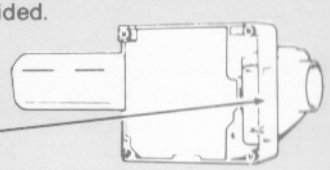
In addition, this machine features a removable bed extension, permitting both flat and free-arm sewing; snap-on presser feet that are quickly removed and easily replaced; a one-way needle clamp that makes it impossible to put the needle in backwards; and a one step buttonhole attachment that allows you to make buttonholes in one, easy step!

Take some time to acquaint yourself with this owner's manual and your machine. Whether you are a novice or an experienced sewer, you will discover how easy it is to create something uniquely your own!

Dear Customer:

We recommend that for future reference you record the Serial Number of your Sewing Machine in the space provided.

Refer to illustration at right for location of Serial Number on your machine.



Serial No. _____

To ensure that you are always provided with the most modern sewing capabilities, the manufacturer reserves the right to change the appearance, design or accessories of this sewing machine when considered necessary.

Part No. 317104

*A Trademark of The Singer Company

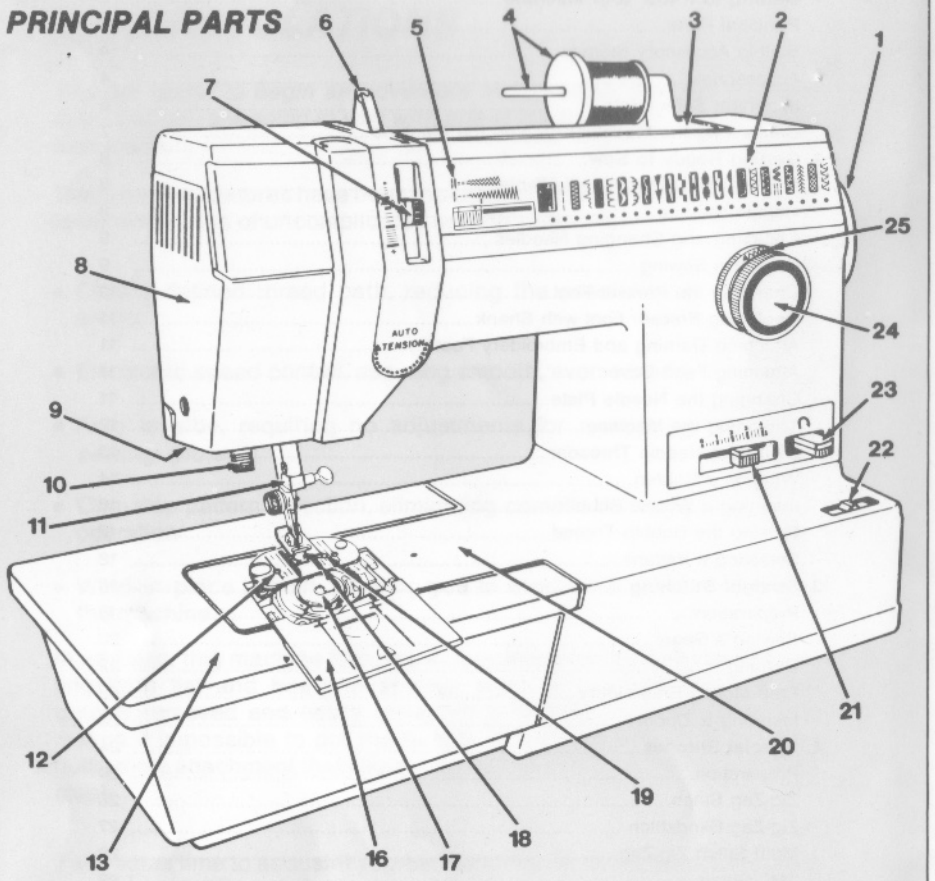
Printed in Taiwan

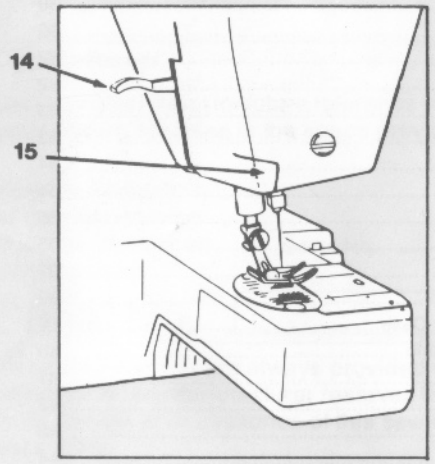
TABLE OF CONTENTS

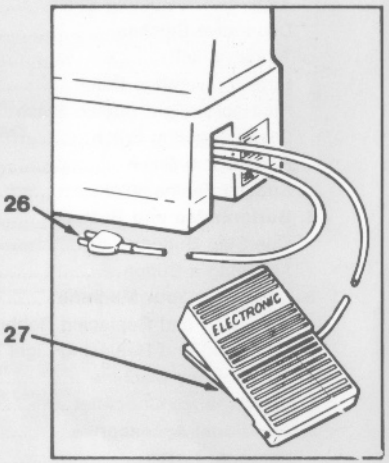
1. Getting to Know Your Machine 2
Principal Parts 2
Built-in Accessory Storage 4
Accessories 4
Important Safeguards 6
Connecting the Machine/Running the Machine 7
2. Getting Ready to Sew 8
Fabric, Thread and Needle Table 8
Handle Storage 8
Choosing and Changing Needles 9
Free Arm Sewing 9
Changing the Presser Foot 10
Replacing Presser Foot with Shank 11
Attaching Darning and Embroidery Foot 11
Attaching Feed Cover 11
Changing the Needle Plate 11
Threading the Machine 12
Using the Needle Threader 13
Winding a Bobbin 14
Inserting a Wound Bobbin 16
Raising the Bobbin Thread 17
Selecting a Pattern 18
3. Straight Stitching 18
Preparation 18
Sewing a Seam 20
Darning 22
Free Motion Embroidery 22
Inserting a Zipper 23
4. Special Stitches 24
Preparation 24
Zig-Zag Stitch 26
Zig-Zag Blindstitch 27
Multi Stitch Zig-Zag 28
"M" Stitch 28
Crescent Stitch/Chinese Dynasty Stitch/Kite Tail Stitch 29
Arrow Stitch/Bunting Stitch 30
Decorative Stitches 30
Turkish Stitch 32
Stretch Overedge Stitch 32
Ric-Rac/Straight Stretch Stitch 33
Crown/Fagoting Stitch 33
Honeycomb Stitch 34
Straight Featherstitch 34
5. Buttonholes and Buttons 35
One-Step Buttonholing 35
Attaching a Button 37
6. Caring for Your Machine 39
Removing and Replacing Bobbin Case 39
Removing and Replacing Light Bulb 40
Cleaning the Machine 41
Performance Checklist 42
Additional Accessories 43
Personal Notes 44
Index 45

SECTION 1 GETTING TO KNOW YOUR MACHINE

PRINCIPAL PARTS



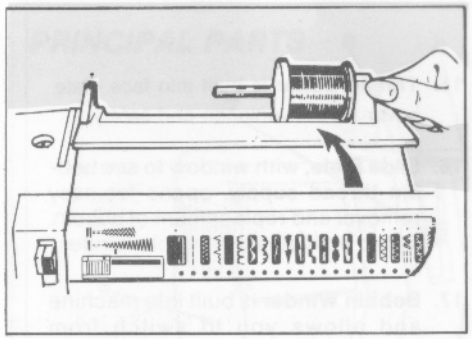




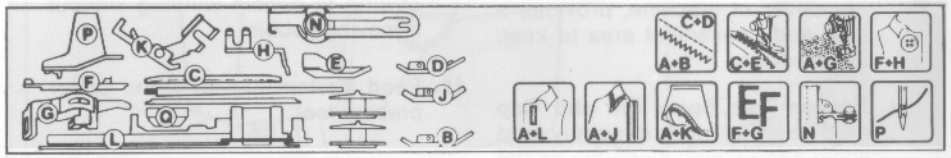
Principal Parts

1. **Hand Wheel** provides a means for raising or lowering the needle.
2. **Pattern Display Panel** shows a variety of patterns available for your sewing needs. **Green pattern indicator** appears under the pattern you select by turning Pattern Selector Dial, #24.
3. **Built-In Accessory Storage**, under top cover of machine, provides a neat and convenient area to keep accessories.
4. **Friction-Free Spool Pin and Cap** hold the top thread supply and allow it to unwind smoothly as the spool does not turn.
5. **Stitch Width Lever** controls the width of patterns and sets the needle for straight stitching.
6. **Snap-In Thread Guide** helps to insure a smooth flow of thread from the spool to the tension.
7. **Auto Needle Thread Tension Lever** controls top thread tension.
8. **Face Plate** is a removable cover protecting movable parts and sewing light.
9. **Sewing Light** illuminates sewing area.
10. **Buttonhole Lever** activates the one-step buttonholer.
11. **One-Way Needle Clamp** holds needle in machine and prevents incorrect insertion.
12. **Needle Plate** supports the fabric during sewing.
13. **Removable Extension Table** lets you change the machine bed from flat to free arm.
14. **Presser Foot Lifter,** at the back of machine, lets you raise and lower presser foot.
15. **Thread Cutter** is built into face plate cover for convenience and safety.
16. **Slide Plate,** with window to see bobbin thread supply, opens for easy removal and replacement of bobbin. It also activates the bobbin winder.
17. **Bobbin Winder** is built into machine and allows you to switch from sewing to bobbin winding without removing bobbin.
18. **Feed System** moves fabric under presser foot.
19. **Presser Foot** holds fabric against the feed system and snaps on and off.
20. **Bed** is the work surface of the machine.
21. **Stitch Length Lever** allows for a variety of stitch lengths.
22. **Power and Light Switch** turns on the machine and sewing light at the same time.
23. **Reverse Lever** provides either momentary or continuous reverse fabric movement.
24. **Pattern Selector Dial** lets you move the green pattern indicator to any of the 24 patterns, plus buttonhole, shown on the pattern display panel.
25. **Stitch Balance Ring** adjusts appearance of Special Stitch patterns and buttonholes.
26. **Electrical Power Cord** connects machine to your electrical outlet.
27. **Speed Controller,** designed for safety and convenience, regulates the electronic solid state speed control.

BUILT-IN ACCESSORY STORAGE



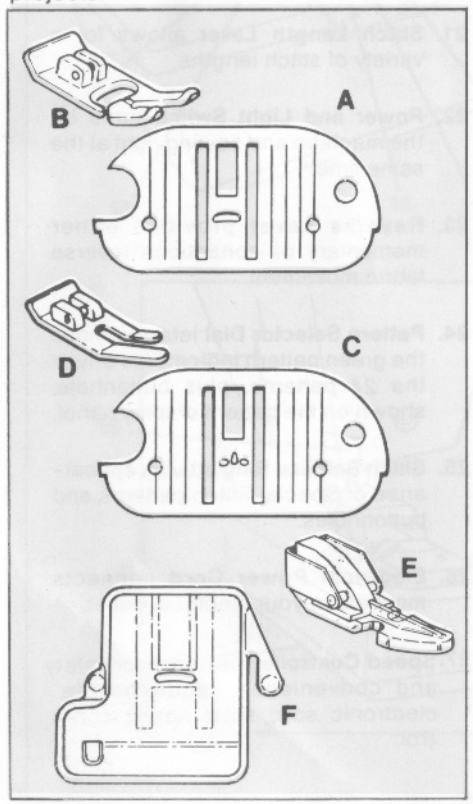
The letter-coded accessories accompanying your machine are conveniently kept in the built-in accessory storage under the top lid of the machine. The chart on the left side of the lid identifies the location of the accessories. The chart on the right side gives the accessory combinations for the illustrated applications. For example, to sew a button, use the feed cover **(F)** with the button sewing foot **(H)**.



NOTE: This chart gives only a sampling of applications. Additional applications may be found in other sections of this manual. Lint brush can be used to aid removal of accessories.

ACCESSORIES

The accessories for your machine are designed to simplify many of your sewing projects.

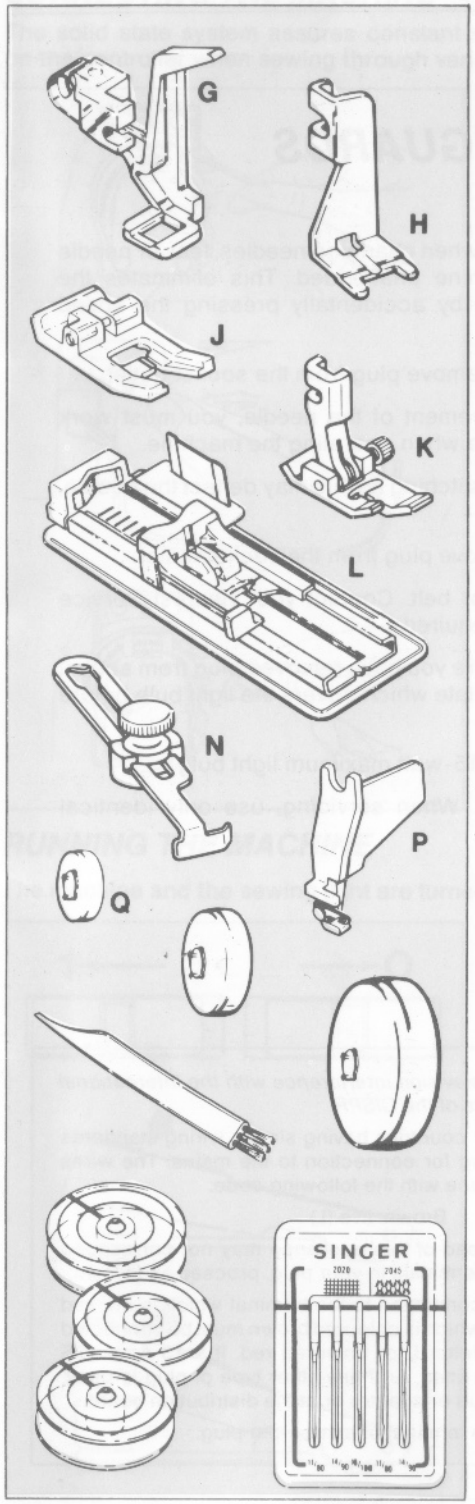


General Purpose Needle Plate (A), and **Presser Foot (B)**, are standard on the machine. Used for straight and zig-zag stitching.

Straight Stitch Needle Plate (C), and **Presser Foot (D)**, used when straight stitching light-weight fabrics.

Zipper Foot (E), for inserting zippers.

Feed Cover (F), used for button sewing, free motion work and darning. It keeps the feed from moving fabric.



Darning and Embroidery Foot (G) is recommended for free motion work, such as embroidery, monogramming and decorative designs.

Button Sewing Foot (H) hold buttons securely for fastening.

Special Purpose Presser Foot (J), used for decorative and zig-zag sewing.

Blindstitch Presser Foot (K) helps guide fabric for nearly invisible blindstitch hems.

One-Step Buttonhole Attachment (L), used to stitch a complete buttonhole in one single step.

Seam Guide (N) helps keep seam allowances even.

Needle Threader (P) assists in threading machine needle.

Small Thread Spool Cap (Q) for use with small diameter spools of thread.

Medium Thread Spool Cap for use with medium diameter spools of thread.

Large Thread Spool Cap for use with large diameter spools of thread.

Lint Brush, for cleaning the machine.

Bobbins, transparent for easy viewing of thread supply.

Needle Pack includes an assortment for sewing various types of fabrics.

IMPORTANT SAFEGUARDS

1. Remove plug from the socket outlet when changing needles, feet, or needle plates, or when leaving the machine unattended. This eliminates the possibility of starting the machine by accidentally pressing the speed controller.
2. Before removing the bobbin case, remove plug from the socket outlet.
3. Because of the up and down movement of the needle, you must work carefully and watch the sewing area when operating the machine.
4. Do not pull the fabric while you are stitching as this may deflect the needle, causing it to break.
5. Before cleaning your machine, remove plug from the socket outlet.
6. Do not attempt to adjust the motor belt. Contact your nearest Service Center should any adjustment be required.
7. Before changing light bulb, make sure you have removed plug from socket outlet. Be sure to replace the face plate which covers the light bulb before operating the machine.
8. This machine is designed to use a 15-watt maximum light bulg.
9. This machine is double insulated. When servicing, use only identical replacement parts.

This product is suppressed for radio and television interference with the International Electro-technical Commission requirements of the CISPR.

Machines for Great Britain and some other countries having similar wiring standards are shipped from the factory without a plug for connection to the mains. The wires in this mains lead are coloured in accordance with the following code:

Blue: neutral (N) Brown: live (L)

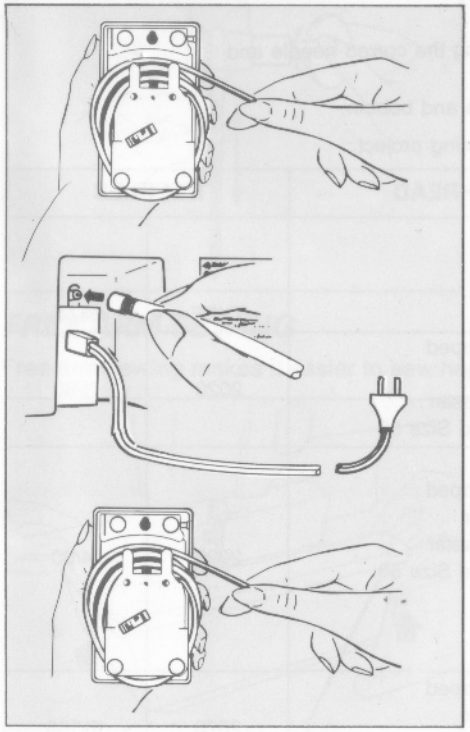
As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter **N** or coloured black. The wire which is coloured brown must be connected to the terminal which is marked with the letter **L** or coloured red. If a 13 Amp. (BS 1363) plug is used, a 3 Amp. fuse must be fitted, or if any other type of plug is used, a 5 Amp. fuse must be fitted either in the plug or adaptor or at the distribution board.

Neither core is to be connected to the earth terminal of a three-pin plug.

CONNECTING THE MACHINE

The solid state system assures constant speed as you maintain the same pressure on the controller when sewing through various fabric thicknesses.



Unwind the air control hose from foot operated speed controller.

Always be sure air hose is not blocked. Pressing on the controller, you should feel a slight air flow from the hose.

Plug this air hose onto the receptacle above power cord, at the right end of the machine.

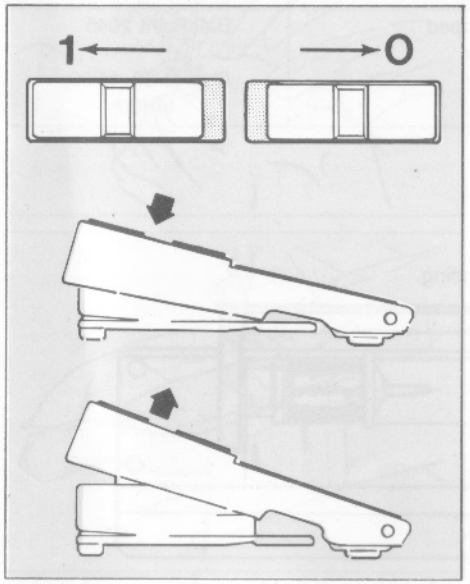
Then connect the electrical power cord plug to your electrical outlet.

NOTE: When not using the machine, rewind air hose around speed controller for storage, as shown.

Do not operate machine without material under the presser foot as this may damage the feed and the foot.

RUNNING THE MACHINE

The machine and the sewing light are turned on and off by the same power switch.



To turn on machine and sewing light, slide power switch left to **"1"** position. To turn off machine and light, slide power switch to right to **"O"** position.

To run the machine, press the speed controller. The harder you press, the faster the machine will sew.

To stop the machine from sewing, remove pressure from speed controller.

SECTION 2 GETTING READY TO SEW

Fabric, Thread and Needle Table

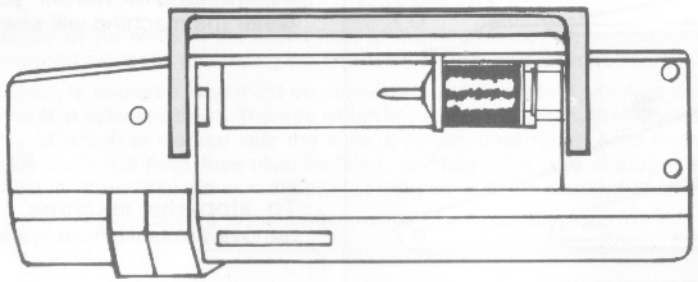
- The table below is a general guide for selecting the corred needle and thread combination for your fabric.
- Be sure to use the same thread in both needle and bobbin.
- Always check this table before beginning a sewing project.

FABRICS		THREAD	NEEDLES	
The fabrics below can be of any fiber: cotton, linen, silk, wool, synthetic, rayon, blends. They are listed as examples of weight.			TYPE	SIZE
Light-Weight	Batiste Chiffon Crepe	Cotton-wrapped Polyester 100% Polyester †Mercerized Size 60	2020	11/80
Medium-Weight	Corduroy Double Knit Flannel Gabardine Gingham Linen Muslin Wool Crepe	Nylon Cotton-wrapped Polyester 100% Polyester †Mercerized Size 50	2020	14/90
Medium-Heavy	Bonded Wovens Canvas Coating Denim Duck Sailcloth	Cotton-wrapped Polyester 100% Polyester †Mercerized Size 40 †"Heavy Duty"	2020	16/100
			2020	18/110
Knits	Bonded Knits Double Knit Jersey Tricot	Cotton-wrapped Polyester Nylon Polyester	Ball-Point 2045	Size 11/80, 14/90, 16/100

†Do not use on stretch fabrics.

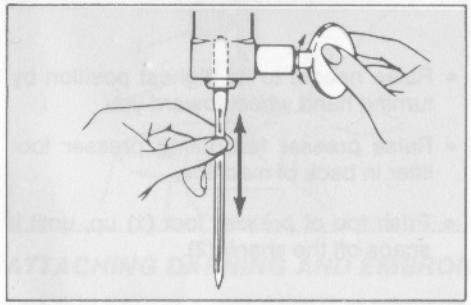
Handle Storage

Push into recessed position before sewing or winding.



CHOOSING AND CHANGING NEEDLES

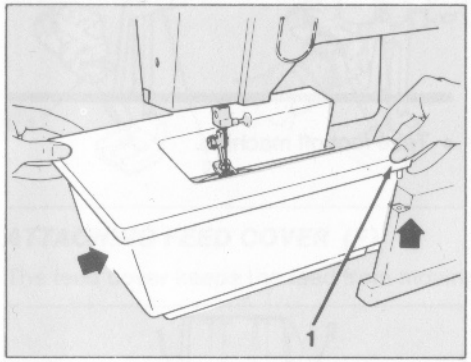
IMPORTANT: For best sewing results, use only Singer* needles.
Check the needle package, and the Fabric, Thread and Needle Table on page 8, for the correct needle and fabric combination.



- Raise needle to its highest position.
- Loosen needle clamp screw and remove needle.
- With flat side of needle to the back, insert new needle up into clamp as far as it will go.
- Tighten needle clamp screw securely.

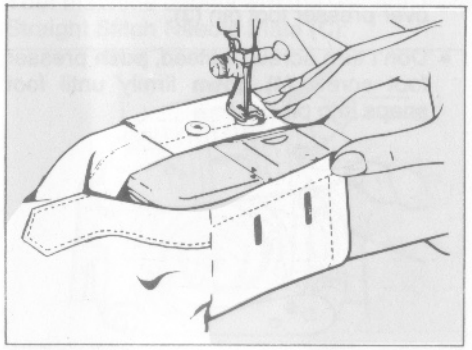
FREE ARM SEWING

Free arm sewing makes it easier to sew hard-to-reach areas.



To change machine for free arm sewing, push in and lift right edge **(1),** of extension table, slide it to the left and off the machine.

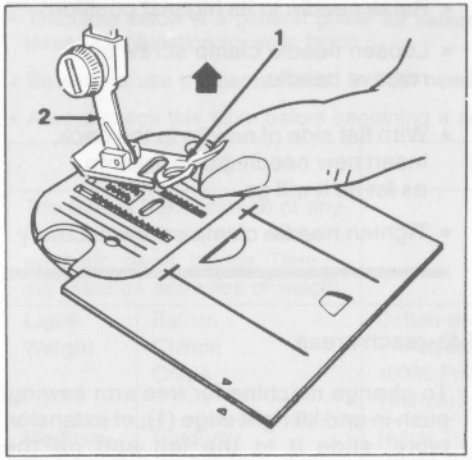
- Topstitch edges on sleeves, or finish waistbands and pants legs easily.



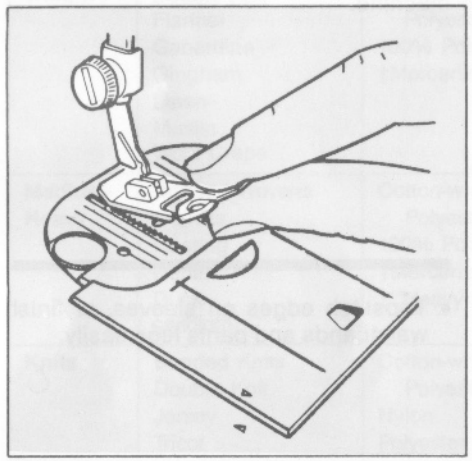
- Attach buttons without stretching cuffs and neckbands.

CHANGING THE PRESSER FOOT (B) (D) (E) (J) (L)

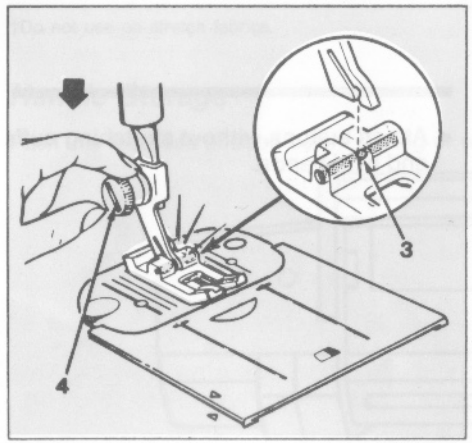
Your machine comes with the General Purpose Presser Foot (B) already attached. You can easily change to any one of the other presser feet which snap onto a common shank by following the directions below.



- Raise needle to its highest position by turning hand wheel toward you.
- Raise presser foot using presser foot lifter in back of machine.
- Push toe of presser foot **(1)** up, until it snaps off the shank **(2)**.



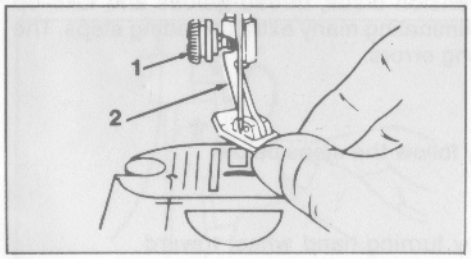
- Take foot off machine.



- Place new foot under center of shank.
- Lower presser foot lifter, fitting shank over presser foot pin **(3)**.
- Don't turn screw. Instead, **push** presser foot screw **(4)** **down** firmly until foot snaps into place.

REPLACING PRESSER FOOT WITH SHANK (H) (K)

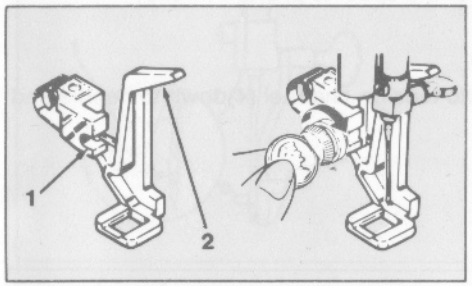
Presser feet with built-in shanks can be replaced as follows:



- Turn machine off.
- Raise needle and presser foot.
- Loosen presser foot screw **(1)** and remove presser foot with shank **(2)**, guiding it toward you and to the right.
- To replace presser foot with shank, hook shank around the presser bar and tighten presser foot screw.

ATTACHING DARNING AND EMBROIDERY FOOT (G)

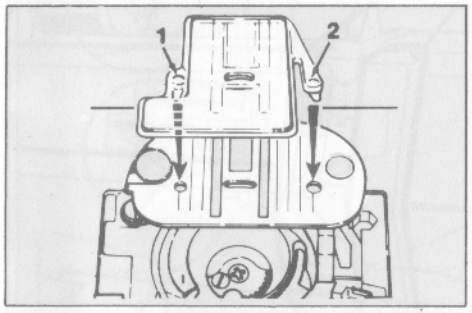
This foot permits better control of fabric when doing free motion work.



- Raise needle.
- Remove presser foot with shank.
- Guide Darning and Embroidery Foot from back of needle, with holding fork **(1)** around presser foot screw, and lifting finger **(2)** above needle clamp.
- Tighten presser foot screw with coin.
- To remove, loosen screw; guide foot back.

ATTACHING FEED COVER (F)

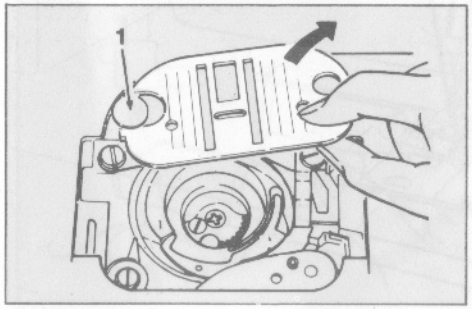
The feed cover keeps the feed from moving the fabric.



- Raise needle and presser foot.
- Open slide plate.
- Slide feed cover on top of needle plate, pressing tabs **(1)** and **(2)** into holes.
- Close slide plate.
- To remove, open slide plate and lift front edge of cover; pull it away.

CHANGING THE NEEDLE PLATE (A) (C)

Your machine comes wih the General Purpose Needle Plate **(A)** attached. To attach the Straight Stitch Needle Plate **(C)**:



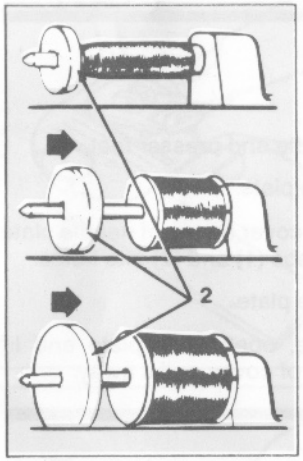
- Raise needle and presser foot.
- Open slide plate.
- Lift up needle plate from right corner and slide out from under foot.
- To replace needle plate, slide it under pin **(1)** and push it firmly to the left.
- Press down until it snaps into place.

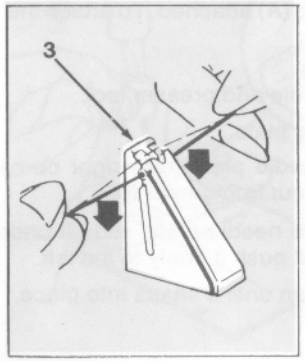
THREADING THE MACHINE

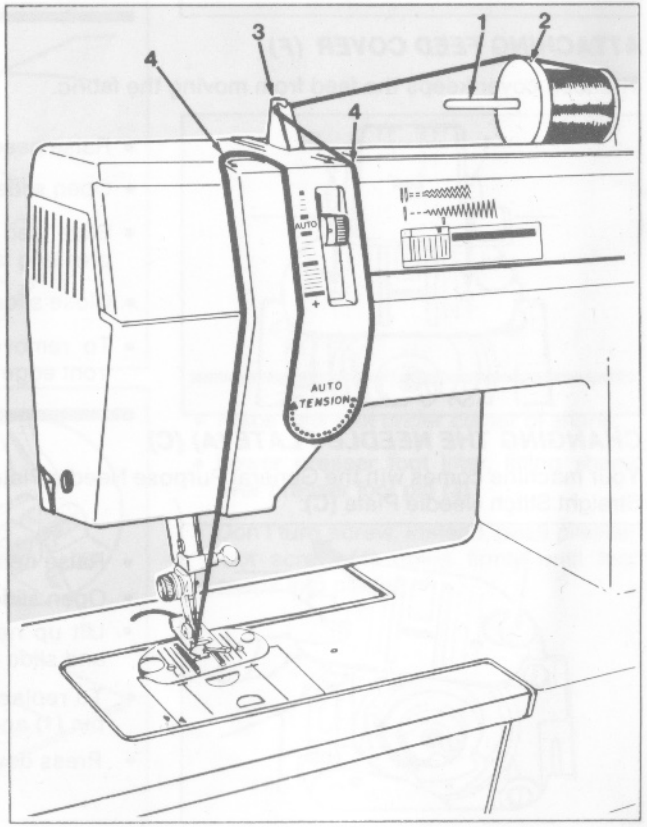
Your sewing machine is easily threaded. Tension discs, thread guides and take-up lever have been designed as internal parts, eliminating many extra threading steps. The clear threading path helps you avoid threading errors.

To thread your machine correctly, simply follow the steps below:

- Raise presser foot lifter.
- Raise needle to its highest position by turning hand wheel toward you.
- Place spool of thread on spool pin **(1)**.
- Slide spool cap **(2)** firmly **over** the rim of the spool to prevent thread tangling.
- Snap thread into thread guide post **(3)**.
- Following arrows, guide thread into auto tension channel **(4)**down to needle and firmly pull thread.
- Thread needle **from front to back**.

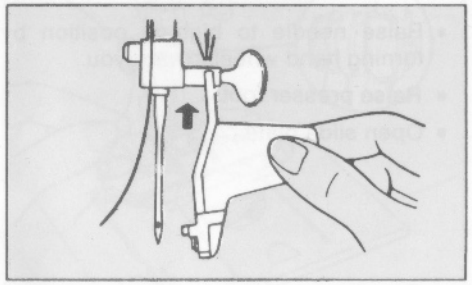




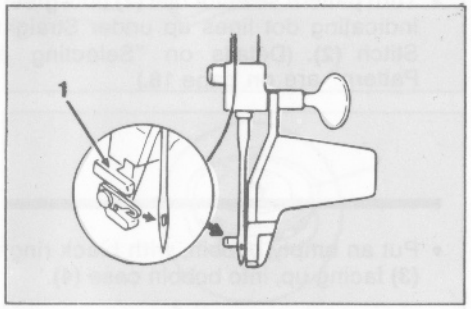


USING THE NEEDLE THREADER (P)

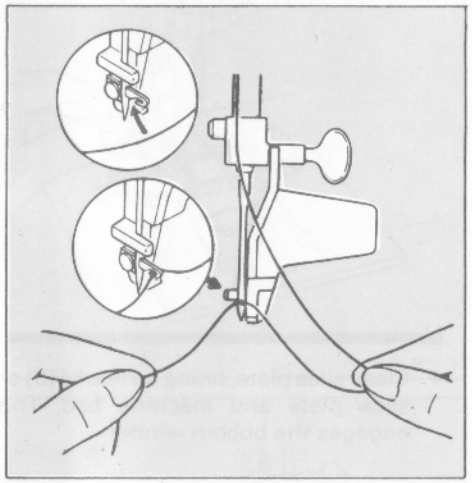
To help in threading the machine needle, use the needle threader as follows:



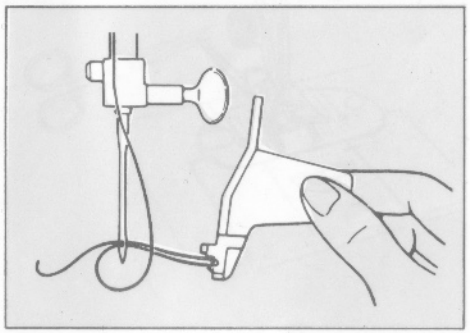
- Thread machine and draw 4" (10 cm) of thread down to the needle.
- Lower presser foot lifter.
- Holding needle threader as shown with your right hand, position U-shaped part of threader under bar of needle clamp.
- Snap threader up onto bar.



- Swing threader back just far enough to clear the needle.
- Slide threader as far to the left as it will go.
- Be sure guide **(1)** is against the left side of the needle.



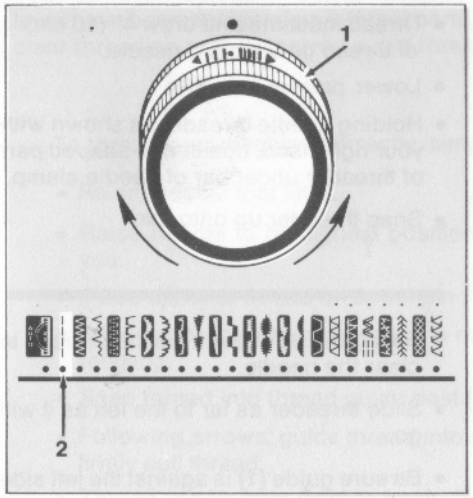
- Bring metal hook of threader forward, through the eye of the needle.
- Holding 3" (7.5 cm) of thread between your fingers, guide thread into metal hook. Release thread.



- Holding threader with right hand, draw metal hook and thread backwards through eye of the needle.
- To remove needle threader, slide it to the right, and off bar of needle clamp.
- Carefully unhook thread from needle threader.

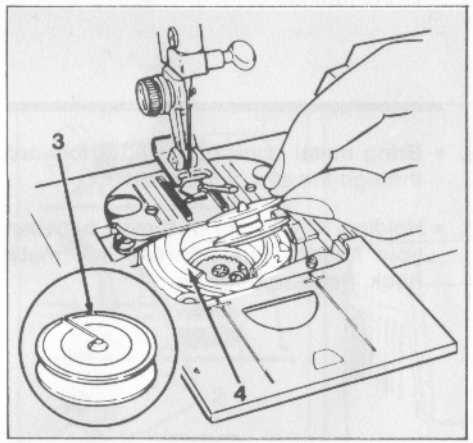
WINDING A BOBBIN

The wind-in-place bobbin winds quickly and easily while it's in the machine.

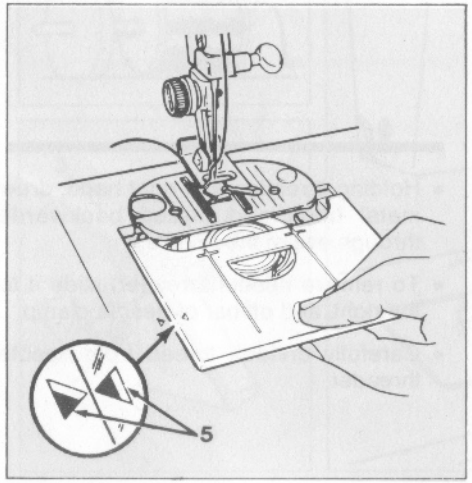


- Raise needle to highest position by turning hand wheel toward you.
- Raise presser foot.
- Open slide plate.

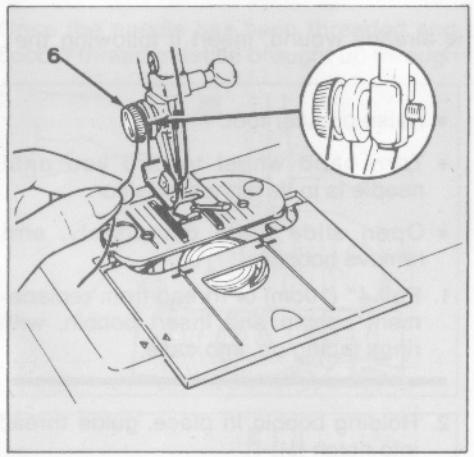
- Turn pattern selector dial **(1)** until green indicating dot lines up under Straight Stitch **(2).** (Details on "Selecting a Pattern" are on page 18.)



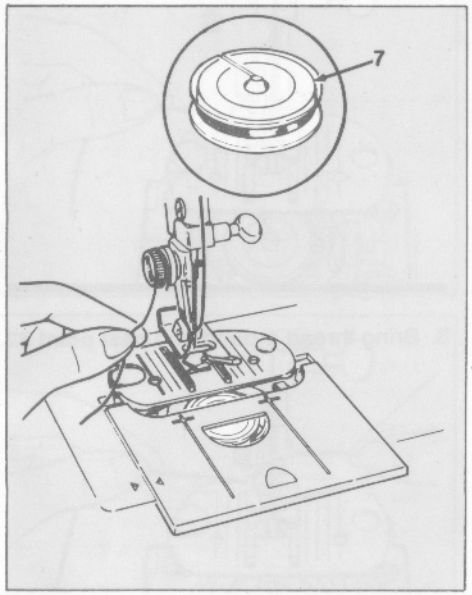
- Put an empty bobbin, with black rings **(3)** facing up, into bobbin case **(4)**.



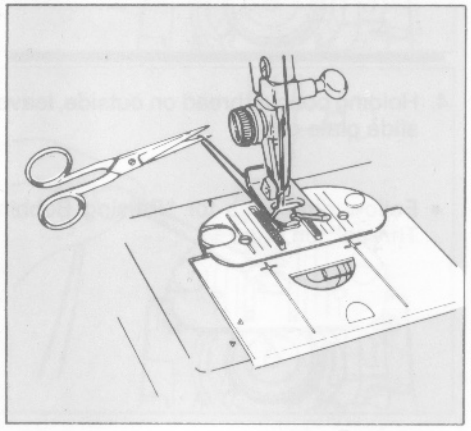
- Close slide plate, lining up marks **(5)** on slide plate and machine bed. This engages the bobbin winder.



- Bring thread from needle, under presser foot and wind it one turn in any direction, around presser foot screw **(6)** pulling it into groove as shown.



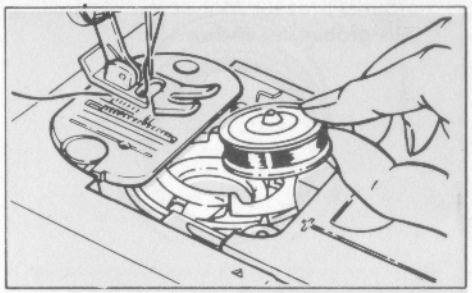
- Begin running machine.
- The window in the slide plate lets you watch the bobbin winding.
- When desired amount of thread has been wound, stop machine. DO NOT ALLOW THREAD TO WIND BEYOND THE OUTSIDE "FULL" RING **(7)**.
- Remove thread from presser foot screw.



- Close slide plate, returning machine to sewing position.
- Raise needle to its highest position.
- Pull 4" (10cm) of thread under foot toward back of machine, and cut.
- To begin sewing, position needle in fabric where desired, lower presser foot and start machine.

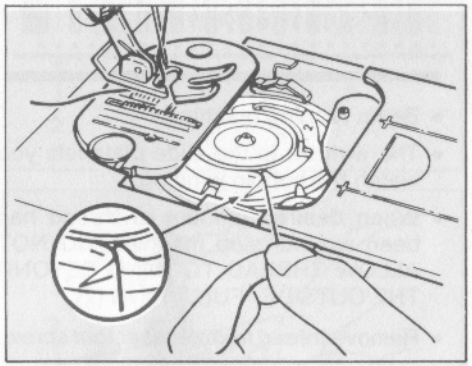
INSERTING A WOUND BOBBIN

When you want to sew with a bobbin that is already wound, insert it following the instructions below.

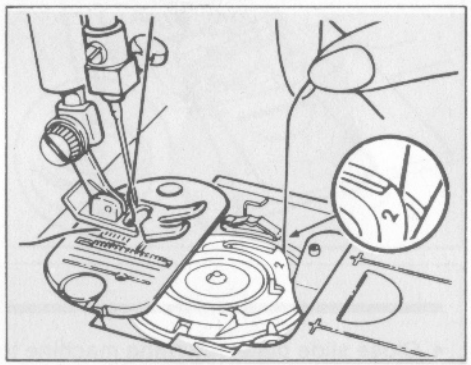


- Raise presser foot.
- Turn hand wheel toward you until needle is in its highest position.
- Open slide plate completely, and remove bobbin.

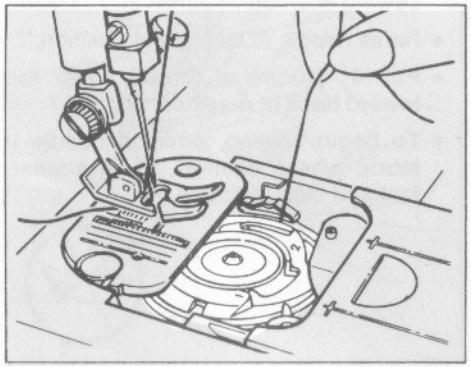
1. Pull 4" (10cm) of thread from replacement bobbin and insert bobbin, with rings facing up, into case.



2. Holding bobbin in place, guide thread into notch (1).



3. Bring thread around and **past point #2.**

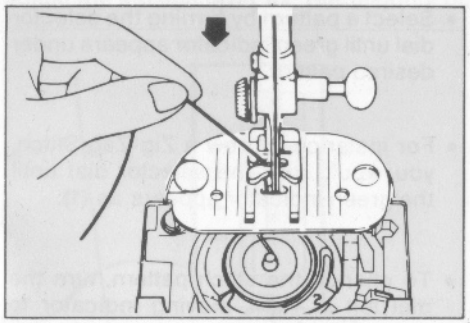


4. Holding bobbin thread on outside, leave slide plate open.

- Follow directions for "Raising Bobbin Thread", on page 17.

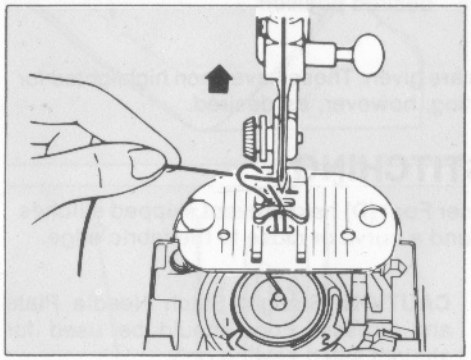
RAISING THE BOBBIN THREAD

Once the needle has been threaded and the bobbin placed in the bobbin case, the bobbin thread must be brought up through the hole in the needle plate.

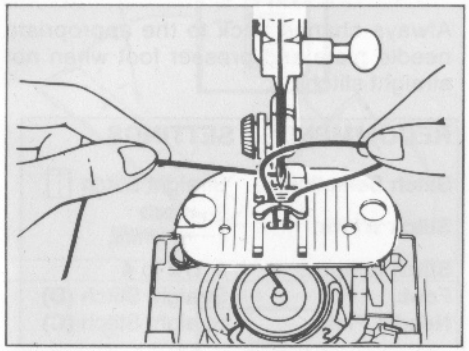


- Be sure slide plate is fully open.

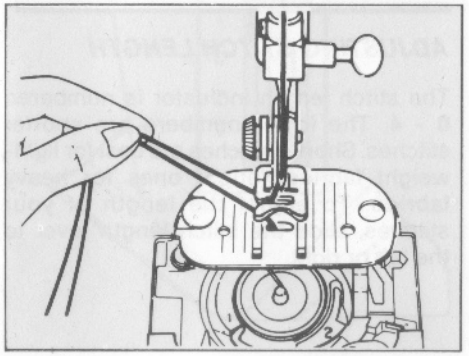
1. Hold needle thread with left hand.
- Turn hand wheel slowly toward you, lowering needle into hole in plate.



2. Continue to do this until needle rises above needle plate.
- Pull gently on needle thread and bring up bobbin thread in a loop.



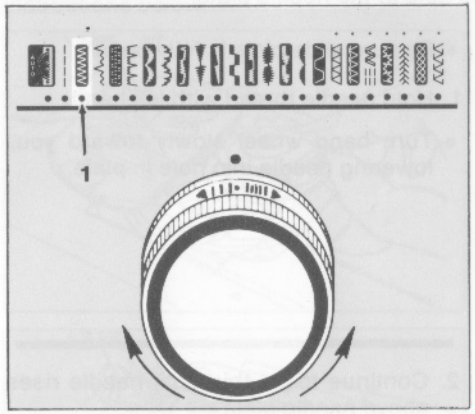
3. Open loop with fingers to find end of bobbin thread.



4. Draw needle thread through left side opening in presser foot.
- Pull both threads to back of machine.
- Completely close slide plate once bobbin thread has been brought up.

SELECTING A PATTERN

The stitches illustrated on the pattern display panel are the available patterns.

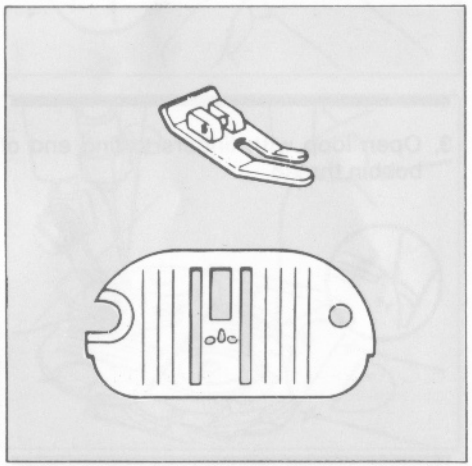


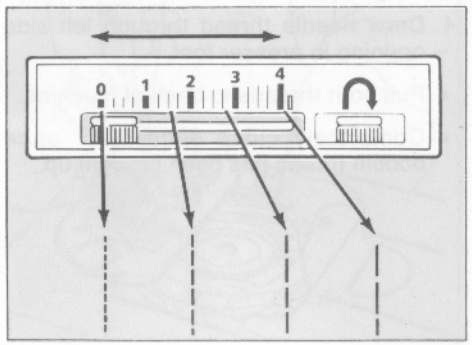
- Select a pattern by turning the selector dial until green indicator appears under desired pattern.
- For instance, to sew a Zig-Zag Stitch, you would turn the selector dial until the green indicator appears as (1).
- To change the stitch pattern, turn the dial left or right, moving indicator to desired position.

With each application, recommended settings are given. These have been highlighted for easy identification. You can adjust each setting, however, as desired.

SECTION 3 STRAIGHT STITCHING

The Straight Stitch Needle Plate **(C)** and Presser Foot **(D)** help prevent skipped stitches and control fabric when straight stitching around a curve or close to the fabric edge.





CAUTION: Straight Stitch Needle Plate and Presser Foot should be used for straight stitch sewing only.

Always change back to the appropriate needle plate and presser foot when not straight stitching.

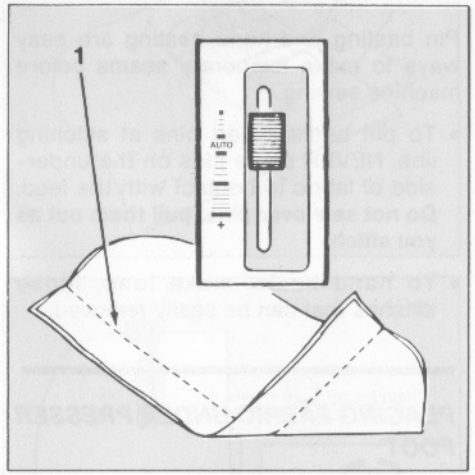
RECOMMENDED SETTINGS	
Stitch Selection:	Straight Stitch
Stitch Width:	
Stitch Length:	**1 1/2** to **4**
Foot:	Straight Stitch **(D)**
Needle Plate:	Straight Stitch **(C)**

ADJUSTING STITCH LENGTH

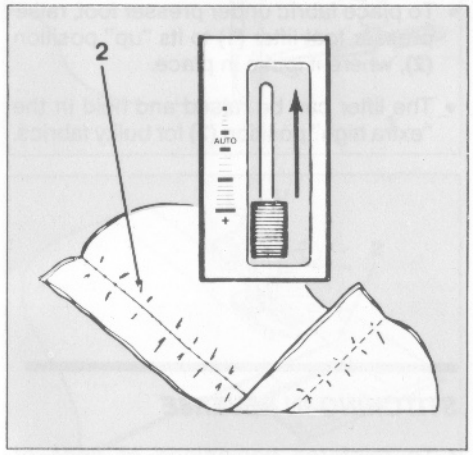
The stitch length indicator is numbered **0 - 4**. The lower numbers are shorter stitches. Shorter stitches are best for light-weight fabrics; longer ones for heavy fabrics. To adjust the length of your stitches, slide the stitch length lever to the left or right.

ADJUSTING THREAD TENSION

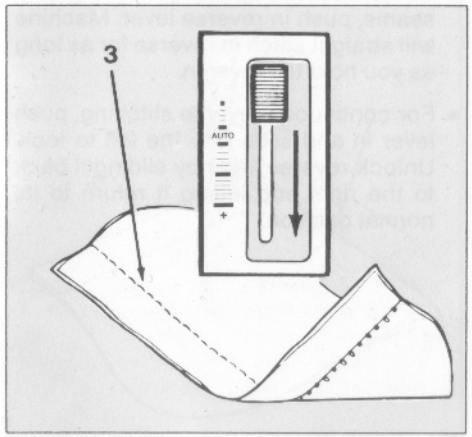
The thread tension of your sewing machine has been pre-set in the auto position to suit most sewing applications. This auto tension feature eliminates the need for you to adjust the tension lever for the majority of your sewing projects.



Proper tension will produce identical stitches on both the front and back of your fabric **(1)**.



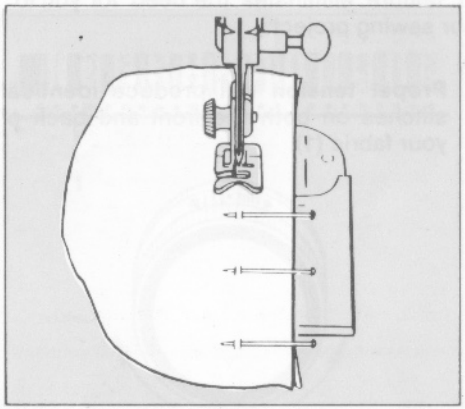
Too much tension will produce a tight stitch, causing a puckered seam **(2)**. Adjust tension by moving lever up toward a looser "—" setting.



Too little tension will produce a loose stitch, causing loops in your seams **(3)**. Adjust tension by moving lever down toward a tighter "+" setting.

SEWING A SEAM

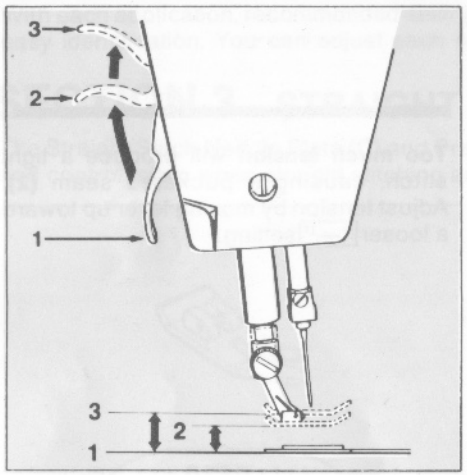
You can sew seams easily and accurately when you follow the suggestions below.



BASTING

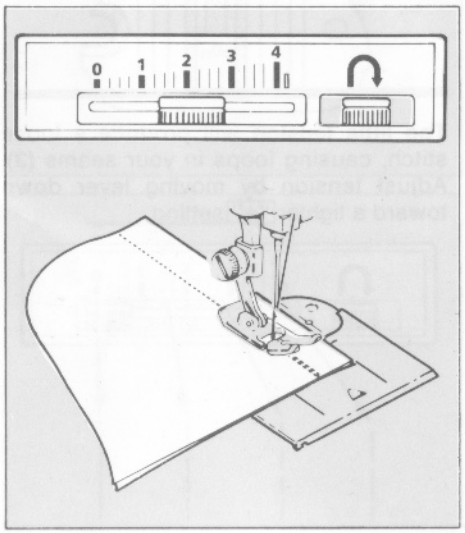
Pin basting and hand basting are easy ways to make temporary seams before machine sewing.

- To pin baste, insert pins at stitching line. NEVER place pins on the underside of fabric in contact with the feed. **Do not sew over pins; pull them out as you stitch.**
- To hand baste, make long, loose stitches that can be easily removed.



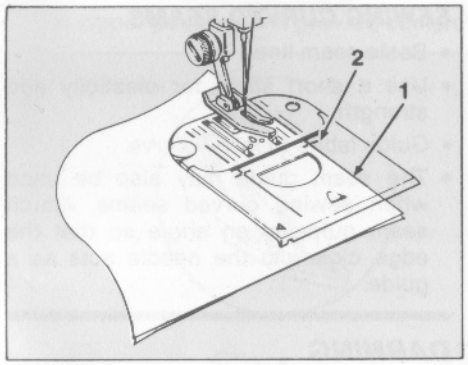
PLACING FABRIC UNDER PRESSER FOOT

- To place fabric under presser foot, raise presser foot lifter **(1)** to its "up" position **(2)**, where it locks in place.
- The lifter can be raised and held in the "extra high" position **(3)** for bulky fabrics.



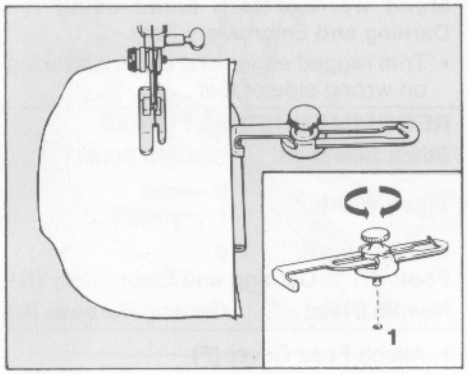
STITCHING IN REVERSE

- To reinforce beginnings or ends of seams, push in reverse lever. Machine will straight stitch in reverse for as long as you hold the lever in.
- For continuous reverse stitching, push lever in and slide it to the left to lock. Unlock reverse lever by sliding it back to the right and letting it return to its normal position.



KEEPING SEAMS STRAIGHT

To keep seams straight, use one of the guidelines on the needle plate. The most commonly used line **(1)** is extended onto the slide plate. The crosslines **(2)** serve as guides when stitching square corners.

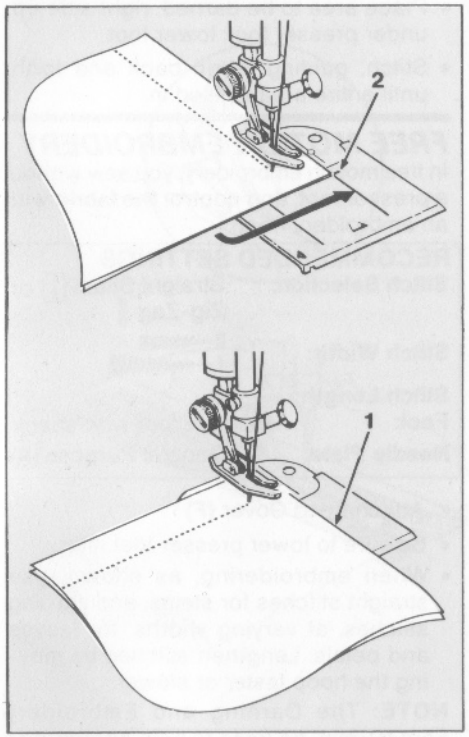


USING THE SEAM GUIDE (N)

For extra help in keeping seams straight, particularly for very narrow or very wide seams, use the seam guide which comes with your machine.

To attach the seam guide, place screw of seam guide into the hole in the bed of the machine, on the right side of slide plate **(1)**.

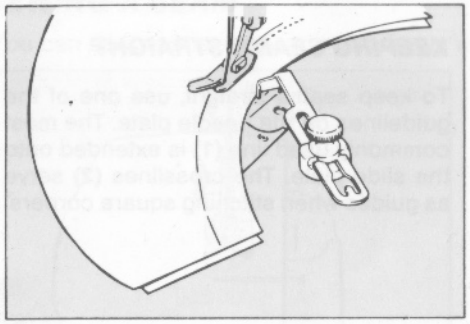
Line up the straight edge of the guide with the needle plate guideline for desired seam width and tighten screw.



TURNING SQUARE CORNERS

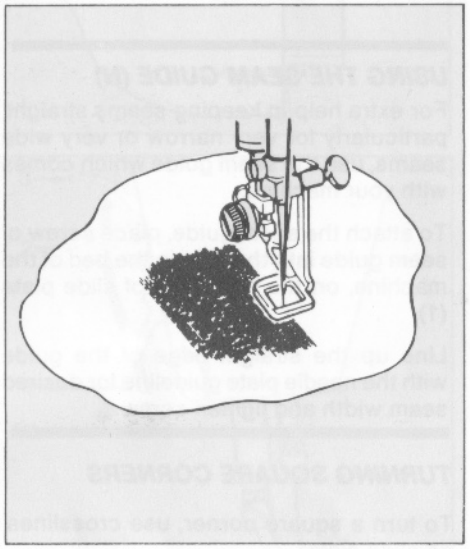
To turn a square corner, use crosslines on slide plate.

- Line up fabric with extended guidelines on needle plate and stitch seam, slowing speed as you approach corner.
- When bottom edge of fabric reaches cornering crosslines **(2)** on slide plate, stop stitching.
- Be sure needle is down in fabric.
- Raise presser foot slightly. Turn fabric, bringing bottom edge in line with guideline **(1)**.
- Continue stitching seam.



SEWING CURVED SEAMS

- Baste seam line.
- Use a short stitch for elasticity and strength.
- Guide fabric to follow curve.
- The seam guide may also be used when sewing curved seams. Attach seam guide at an angle so that the edge closer to the needle acts as a guide.



DARNING

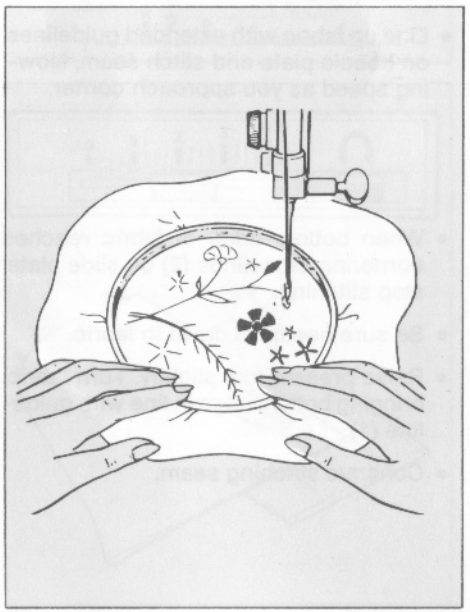
Mend worn or torn areas using the Darning and Embroidery Foot.

- Trim ragged edges and baste a backing on wrong side of tear.

RECOMMENDED SETTINGS

Stitch Selection:	Straight Stitch
Stitch Width:	
Stitch Length:	**0**
Foot:	Darning and Embroidery **(G)**
Needle Plate:	General Purpose **(A)**

- Attach Feed Cover **(F)**
- Place area to be darned, right side up, under presser foot; lower foot.
- Stitch, guiding fabric back and forth, until entire area is filled in.



FREE MOTION EMBROIDERY

In free motion embroidery, you sew without a presser foot, and control the fabric with an embroidery hoop.

RECOMMENDED SETTINGS

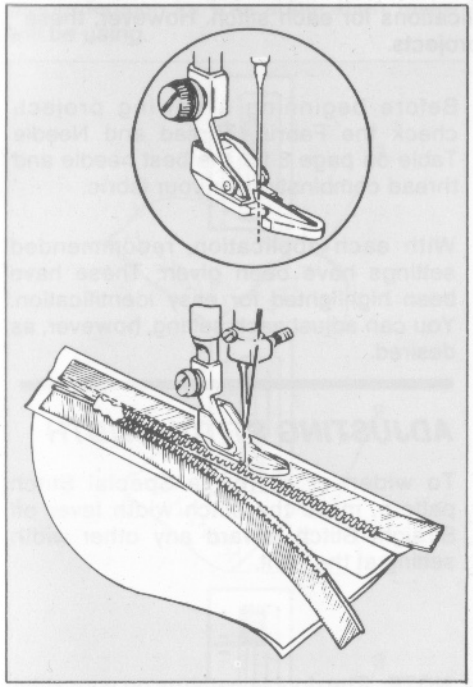
Stitch Selection:	Straight Stitch or Zig-Zag
Stitch Width:	
Stitch Length:	**0**
Foot:	Remove foot with shank
Needle Plate:	General Purpose (A)

- Attach Feed Cover **(F)**
- Be sure to lower presser foot lifter.
- When embroidering, as shown, use straight stitches for stems, and zig-zag stitches, at varying widths, for leaves and petals. Lengthen stitches by moving the hoop faster or slower.

NOTE: The Darning and Embroidery Foot **(G)** may be used to help control fabric

INSERTING A ZIPPER

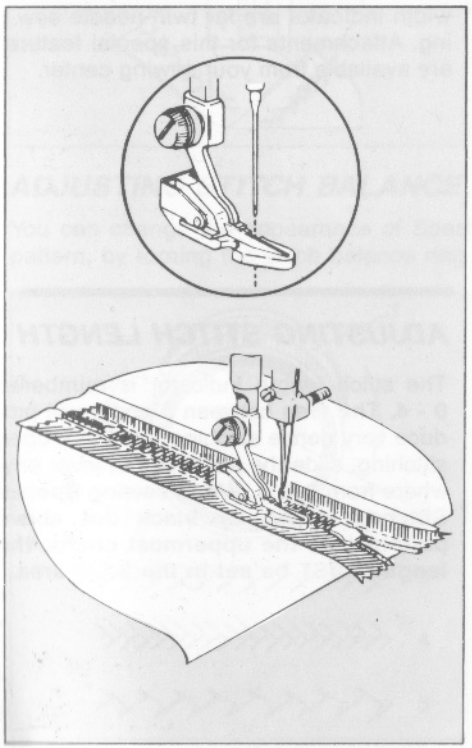
The zipper package will provide complete instructions for inserting zippers.



RECOMMENDED SETTINGS

Stitch Selection:	Straight Stitch
Stitch Width:	
Stitch Length:	**1-1/2** to **4**
Foot:	Zipper **(E)**
Needle Plate:	General Purpose **(A)**

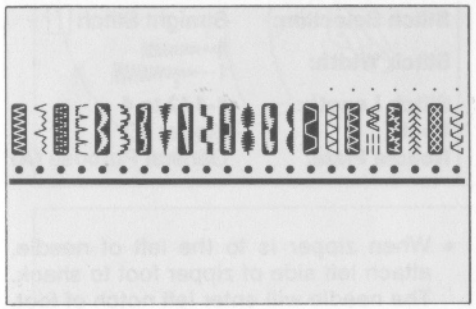
- When zipper is to the left of needle, attach left side of zipper foot to shank. The needle will enter left notch of foot, sewing close along zipper teeth.



- Attach right side of zipper foot to shank when a zipper is to the right side of the needle. The needle will enter right notch of foot, sewing close along zipper teeth.

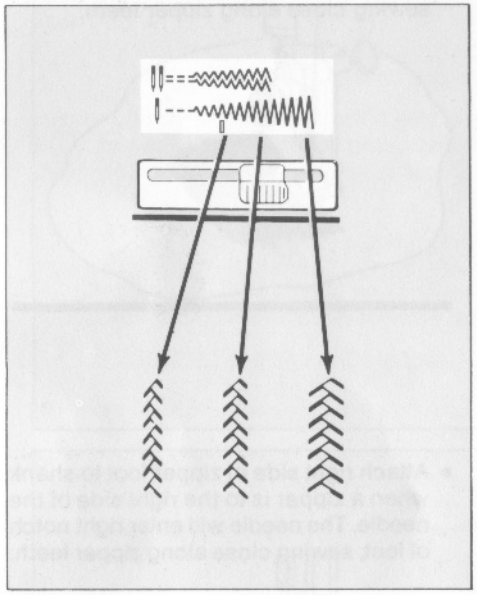
SECTION 4 SPECIAL STITCHES

The 23 Special Stitches on your machine have a variety of practical and decorative uses. In this section are recommended applications for each stitch. However, these stitches can be used for many other sewing projects.



Before beginning a sewing project, check the Fabric, Thread and Needle Table on page 8 for the best needle and thread combination for your fabric.

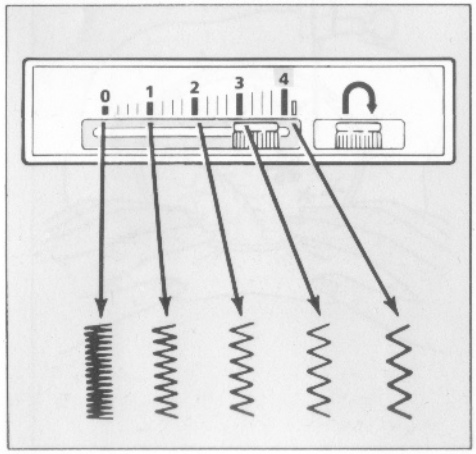
With each application, recommended settings have been given. These have been highlighted for easy identification. You can adjust each setting, however, as desired.



ADJUSTING STITCH WIDTH

To widen or narrow a Special Stitch pattern, move the stitch width lever off Straight Stitch, toward any other width setting at the right.

NOTE: The double patterns on your stitch width indicator are for twin needle sewing. Attachments for this special feature are available from your sewing center.

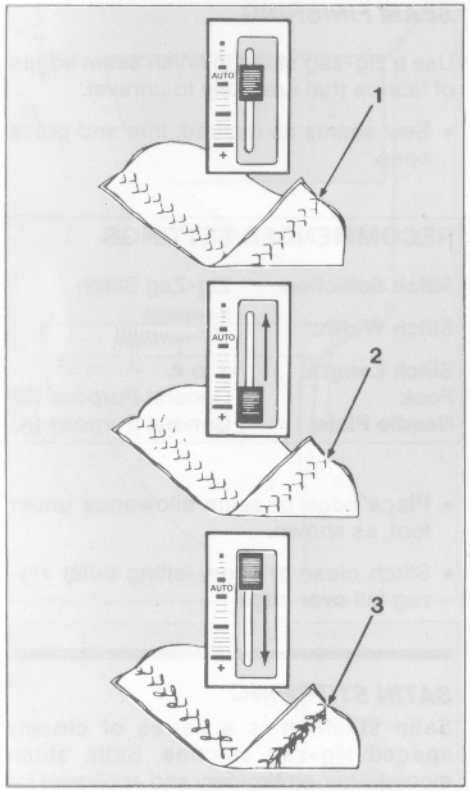


ADJUSTING STITCH LENGTH

The stitch length indicator is numbered **0 - 4.** The area between **0** and **1** will produce very dense stitching. For more open stitching, slide the stitch length lever anywhere from **2** to **4. When sewing Special Stitches shown by black dot above pattern (see the uppermost chart), the length MUST be set in the 3½-4 area.**

ADJUSTING THREAD TENSION

Some Special Stitch patterns may require looser thread tension than others. To find the proper tension for your application, make a test sample with the thread and fabric you will be using.



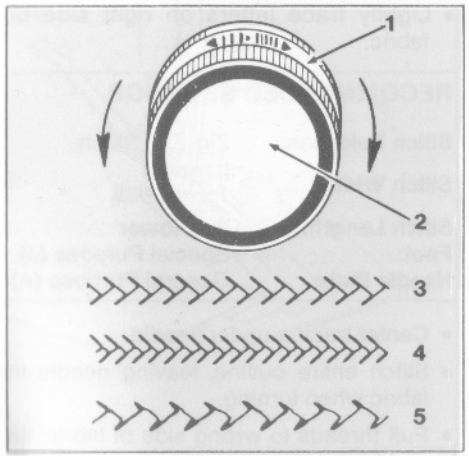
Proper tension produces a smooth, even stitch **(1)**.

Too much tension will produce a tight stitch **(2)**, causing fabric to pucker. Adjust tension by moving lever up toward a looser "–" setting.

Too little tension will produce a loose stitch **(3)**, causing loops in your pattern. Adjust tension by moving lever down toward a tighter "+" setting.

ADJUSTING STITCH BALANCE

You can change the appearance of Special Stitch patterns shown by black dot above pattern, by turning the stitch balance ring **(1)** behind the pattern selector dial **(2).**



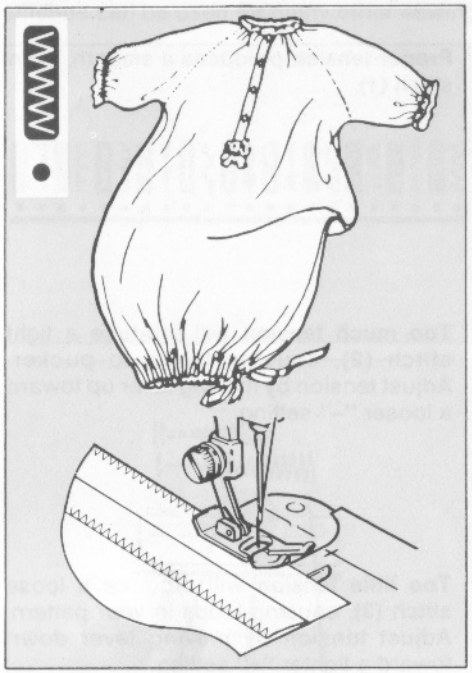
A correctly balanced Fagoting Stitch #23, should appear as illustrated **(3)**.

When stitches are too close together (4), separate them by turning the stitch balance ring to the right.

When stitches are too far apart (5), bring them closer together by turning the stitch balance ring to the left.

ZIG-ZAG STITCH

The Zig-Zag Stitch can be used when sewing seams, appliqueing, monogramming or decorating.



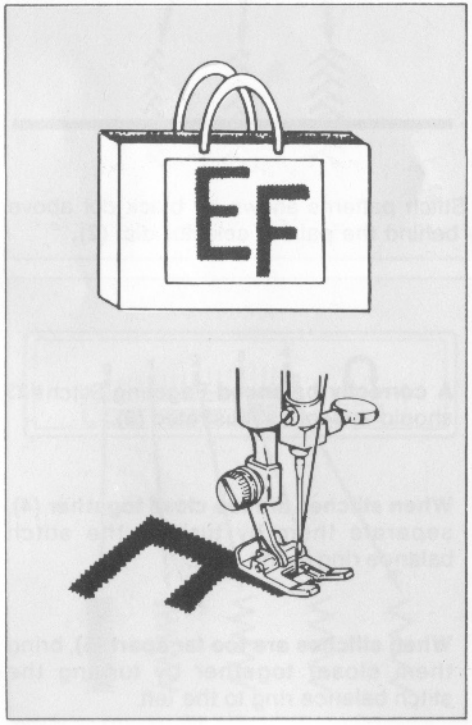
SEAM FINISHING

Use a zig-zag stitch to finish seam edges of fabrics that are likely to unravel.

- Sew seams as desired; trim and press open.

RECOMMENDED SETTINGS	
Stitch Selection:	Zig-Zag Stitch
Stitch Width:	
Stitch Length:	1 to 4
Foot:	General Purpose **(B)**
Needle Plate:	General Purpose **(A)**

- Place edge of seam allowance under foot, as shown.
- Stitch close to edge, letting outer zig-zag fall **over** edge.



SATIN STITCHING

Satin stitching is a series of closely spaced zig-zag stitches. Satin stitch monograms, embroidery and appliques for a smooth, satin-like finish.

- Practice to get desired stitch appearance.

Block Monogramming

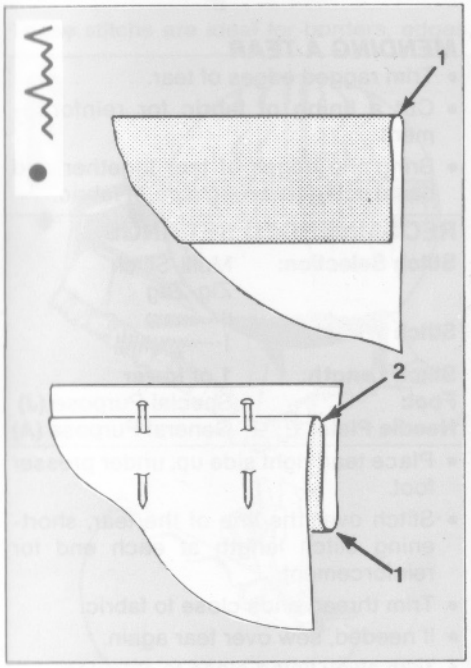
- Lightly trace letters on right side of fabric.

RECOMMENDED SETTINGS	
Stitch Selection:	Zig-Zag Stitch
Stitch Width:	
Stitch Length:	1 or **lower**
Foot:	Special Purpose **(J)**
Needle Plate:	General Purpose **(A)**

- Center tracing under needle.
- Stitch entire outline, leaving needle in fabric when turning.
- Pull threads to wrong side of fabric; tie and trim.

ZIG-ZAG BLINDSTITCH

Use this Blindstitch when sewing hems and seams, or attaching lace and elastic.

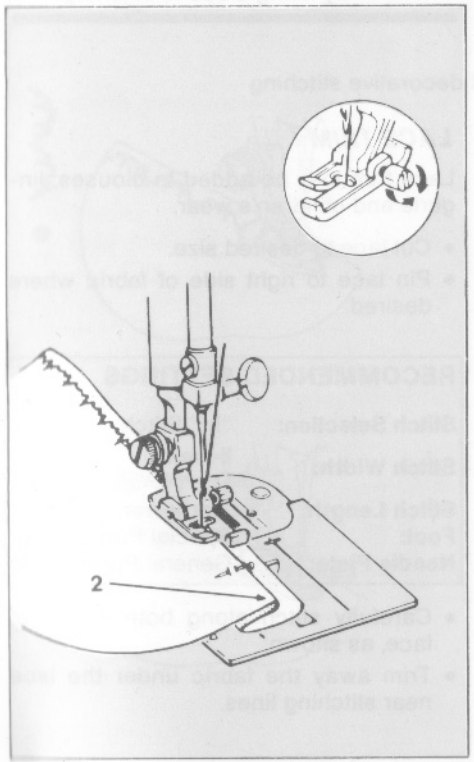


BLINDSTITCH HEMMING

- Practice first on a scrap of material, carefully following each step.

RECOMMENDED SETTINGS	
Stitch Selection:	Zig-Zag Blindstitch
Stitch Width:	
Stitch Length:	2 to 4
Foot:	Adjustable Blindstitch **(K)**
Needle Plate:	General Purpose **(A)**

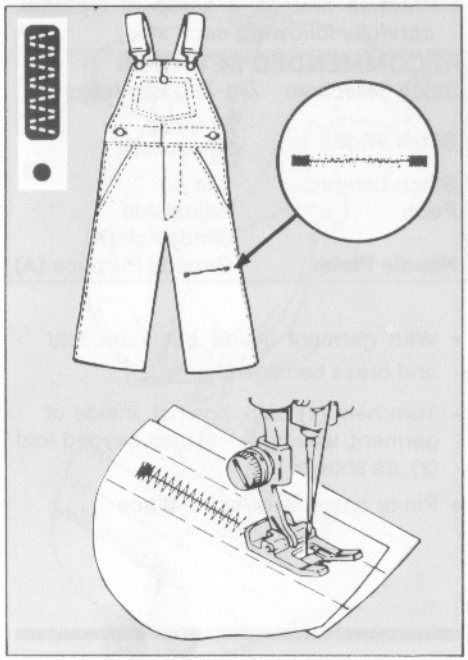
- With garment inside out, mark, fold and press hemline **(1)**.
- Turn hem **(1)** back against inside of garment, leaving ⅛" of hem beyond fold **(2)**, as shown.
- Pin or baste all layers in place.



- Raise presser foot.
- **Place folded edge (2) directly under presser foot.**
- Be sure bulk of garment is to the **left** of needle.
- Lower presser foot.
- Begin sewing slowly, making sure the wide zig-zag stitch enters **only the very edge** of the fold area **(2)**. The narrow zig-zag should fall in the hem area. If this is not happening, adjust the position of the foot.
- **Remove pins as you come to them.**

MULTI-STITCH ZIG-ZAG

Mending, overcasting, joining or reinforcing can all be done using the Multi-Stitch Zig-Zag.



MENDING A TEAR

- Trim ragged edges of tear.
- Cut a lining of fabric for reinforcement.
- Bring the edges of tear together and baste lining to wrong side of fabric.

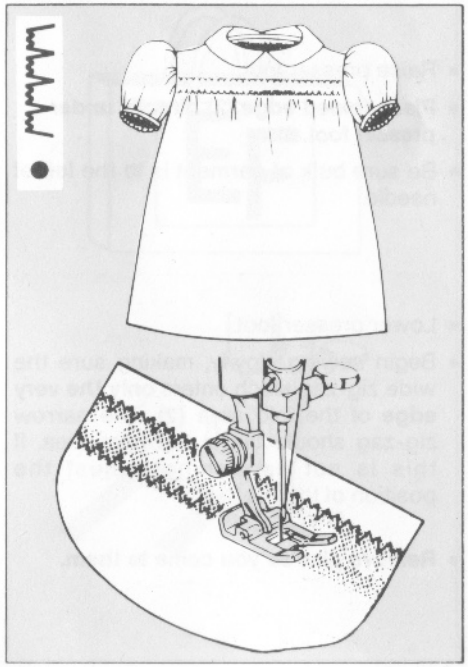
RECOMMENDED SETTINGS

Stitch Selection:	Multi-Stitch Zig-Zag
Stitch Width:	
Stitch Length:	**1** or **lower**
Foot:	Special Purpose **(J)**
Needle Plate:	General Purpose **(A)**

- Place tear, right side up, under presser foot.
- Stitch over the line of the tear, shortening stitch length at each end for reinforcement.
- Trim thread ends close to fabric.
- If needed, sew over tear again.
- Trim away lining close to stitching.

"M" STITCH

This stitch can be used for stretch seams and decorative stitching



LACE TRIM

Lace trim may be added to blouses, lingerie and children's wear.

- Cut lace to desired size.
- Pin lace to right side of fabric where desired.

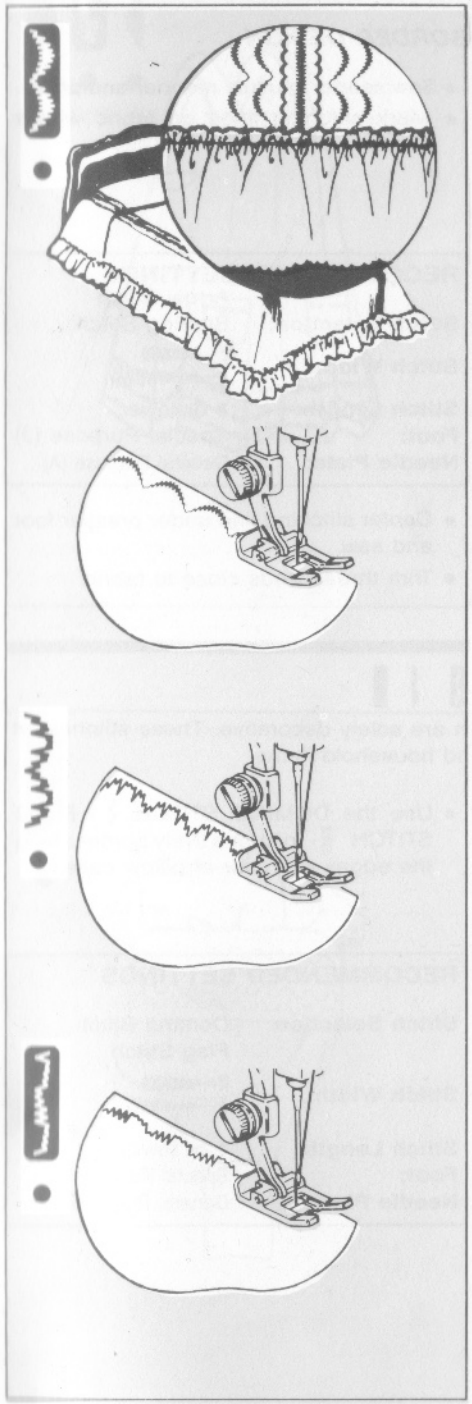
RECOMMENDED SETTINGS

Stitch Selection:	"M" Stitch
Stitch Width:	
Stitch Length:	**2** or **lower**
Foot:	Special Purpose **(J)**
Needle Plate:	General Purpose **(A)**

- Carefully stitch along both edges of lace, as shown.
- Trim away the fabric under the lace near stitching lines.

CRESCENT STITCH /CHINESE DYNASTY STITCH /KITE TAIL STITCH

These stitchs are ideal for borders, edges, smocking and embroidering.



BORDER DESIGN

Border designs decorate clothing and many household items.

- Sew Seams in usual manner and press.
- Mark stitching lines of fabric where desired.

RECOMMENDED SETTINGS

Stitch Selection:	Crescent Stitch
Stitch Width:	
Stitch Length:	1 or lower
Foot:	Special Purpose (J)
Needle Plate:	General Purpose (A)

RECOMMENDED SETTINGS

Stitch Selection:	Chinese Dynasty Stitch
Stitch Width:	
Stitch Length:	1 or lower
Foot:	Special Purpose (J)
Needle Plate:	General Purpose (A)

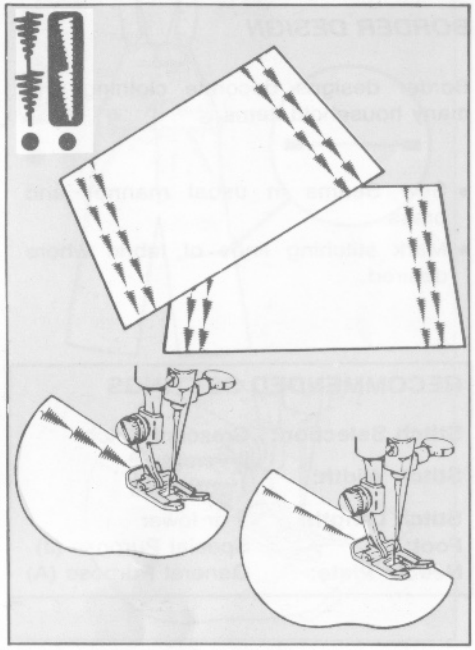
RECOMMENDED SETTINGS

Stitch Selection:	Kite Tail Stitch
Stitch Width:	
Stitch Length:	1 or lower
Foot:	Special Purpose (J)
Needle Plate:	General Purpose (A)

- Center marked line under presser foot and stitch.
- Pull threads to wrong side of fabric; tie and trim.

ARROW STITCH /BUNTING STITCH

These stitchs are decorative and secure finish to seams, pleats and pockets it can also be used as a border design.



BORDER DESIGN

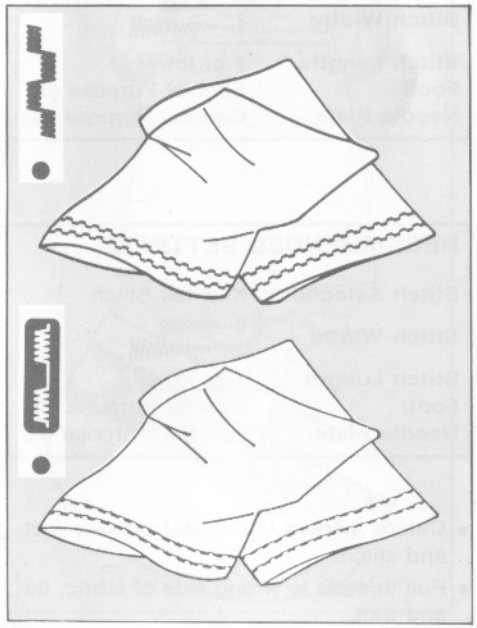
- Sew seams in usual manner and press.
- Mark stitching lines on fabric where desired.

RECOMMENDED SETTINGS	
Stitch Selection:	Arrow Stitch Bunting Stitch
Stitch Width:	
Stitch Length:	1 or lower
Foot:	Special Purpose (J)
Needle Plate:	General Purpose (A)

- Center stitching line under presser foot and sew.
- Trim thread ends close to fabric.

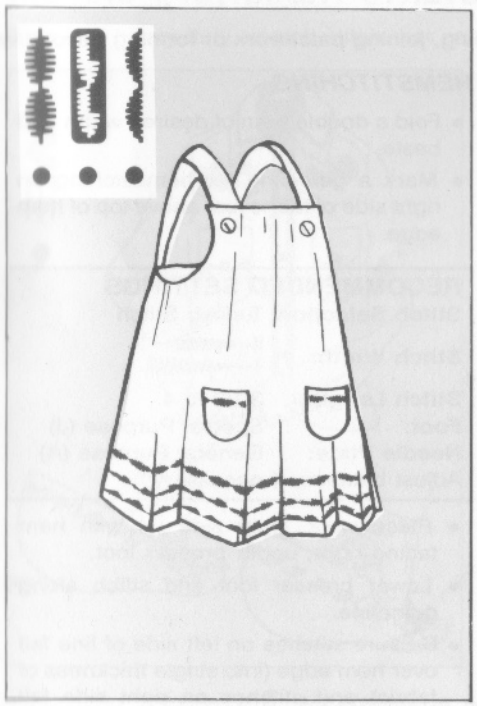
DECORATIVE STITCHES

Your machine can sew several stitches which are solely decorative. These stitches let you create unique, personalized garments and household items.



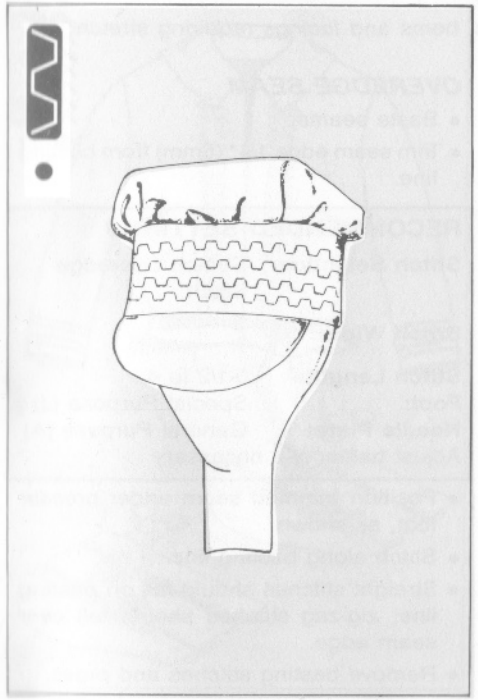
- Use the DOMINO STITCH / FLAG STITCH to form a lively border along the edges of a pair of pillow cases.

RECOMMENDED SETTINGS	
Stitch Selection:	Domino Stitch Flag Stitch
Stitch Width:	
Stitch Length:	1 or lower
Foot:	Special Purpose (J)
Needle Plate:	General Purpose (A)



- Brighten up a plain dress with the SATIN BEAD STITCH /BOOMERANG STITCH /LADY BUG STITCH

RECOMMENDED SETTINGS	
Stitch Selection:	Satin Bead Stitch Booerang Stitch Lady Bug Stitch
Stitch Width:	
Stitch Length:	1 or lower
Foot:	Special Purpose (J)
Needle Plate:	General Purpose (A)

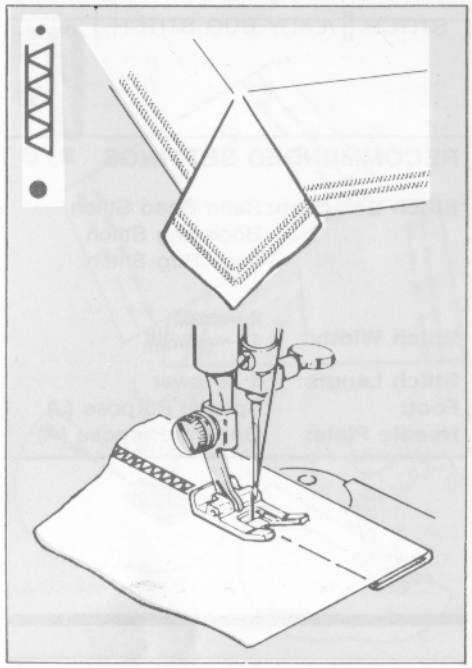


- The RAMPART STITCH can be used to decorate a boy's cap.

RECOMMENDED SETTINGS	
Stitch Selection:	Rampart Stitch
Stitch Width:	
Stitch Length:	1 or lower
Foot:	Special Purpose (J)
Needle Plate:	General Purpose (A)

TURKISH STITCH

The Turkish Stitch can be used for appliqueing, joining patchwork or forming decorative hems on bed and table linens.



HEMSTITCHING

- Fold a double hem of desired width and baste.
- Mark a guideline for hemstitching on right side of fabric just above top of hem edge.

RECOMMENDED SETTINGS

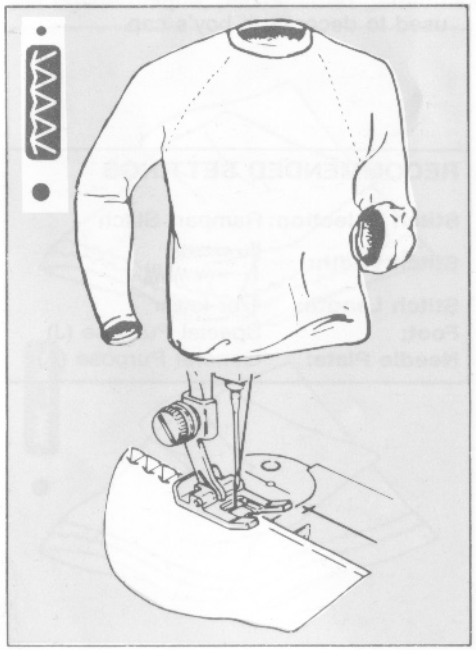
Stitch Selection:	Turkish Stitch
Stitch Width:	
Stitch Length:	3-1/2 to 4
Foot:	Special Purpose (J)
Needle Plate:	General Purpose (A)

Adjust balance, if necessary

- Place work, right side up with hem facing right, under presser foot.
- Lower presser foot and stitch along guideline.
- Be sure stitches on left side of line fall over hem edge (into single thickness of fabric) and stitches on right side fall into double fold of hem.

STRETCH OVEREDGE STITCH

This stitch is primarily used to finish seams, hems and facings requiring stretch.



OVEREDGE SEAM

- Baste seams.
- Trim seam edge 1/4" (6mm) from basting line.

RECOMMENDED SETTINGS

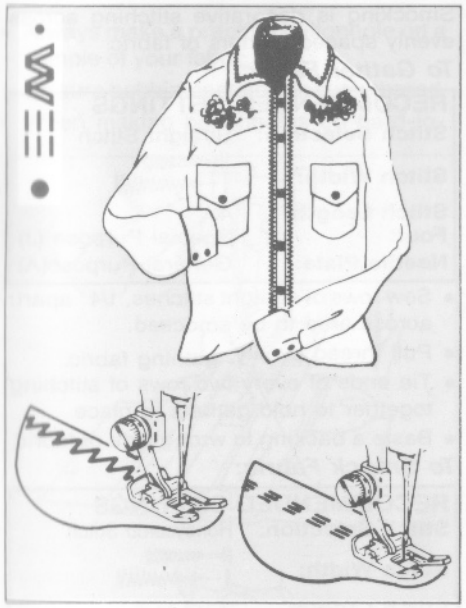
Stitch Selection:	Stretch Overedge Stitch
Stitch Width:	
Stitch Length:	3-1/2 to 4
Foot:	Special Purpose (J)
Needle Plate:	General Purpose (A)

Adjust balance, if necessary

- Position trimmed seam under presser foot, as shown.
- Stitch along basting line.
- Straight stitches should fall on basting line; zig-zag stitches should fall over seam edge.
- Remove basting stitches and press.

RIC-RAC /STRAIGHT STRETCH STITCH

This is a heavy-duty, stretch stitch that can also be used for topstitching.



TOPSTITCHING

- Sew seams in usual manner and press.
- For topstitching hard-to-reach areas, convert machine to free arm sewing.

RECOMMENDED SETTINGS

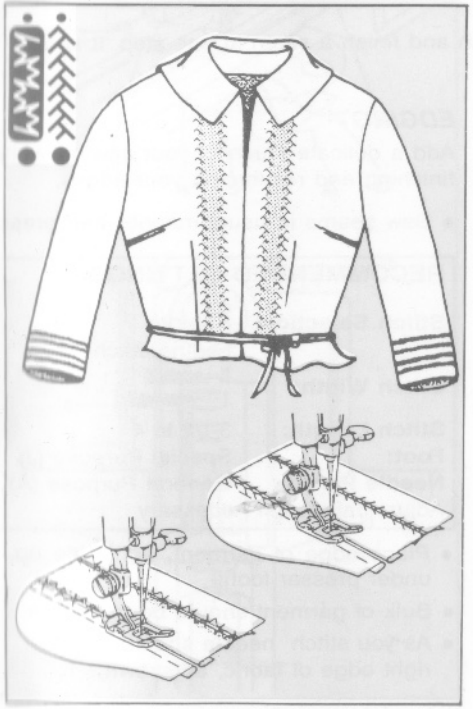
Stitch Selection:	Ric-Rac Straight Stretch Stitch
Stitch Width:	
Stitch Length:	3-1/2 to 4
Foot:	Special Purpose (J)
Needle Plate:	General Purpose (A)

Adjust balance, if necessary

- Place garment right side up, under foot.
- Slowly topstitch desired areas.
- Pull threads to wrong side of fabric; tie and trim.
- To create a straight stretch stitch, set stitch width to the left and stitch length to #4.

CROWN STITCH /FAGOTING STITCH

Use these stitchs fagoting, embroidery, patchwork or strengthening seams.



CROWN/FAGOTING

This is an open, lacy stitch used to join two pieces of fabric.

- Fold under edges to be joined and press.
- Baste the edges 1/8" (3mm) apart onto a sheet of tissue paper for support.
- Position center of work under center of presser foot.

RECOMMENDED SETTINGS

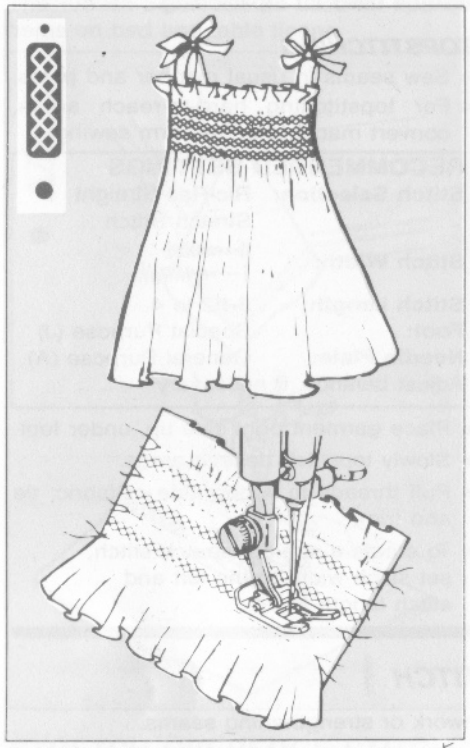
Stitch Selection:	Crown Stitch Fagoting Stitch
Stitch Width:	
Stitch Length:	3-1/2 to 4
Foot:	Special Purpose (J)
Needle Plate:	General Purpose (A)

Adjust balance, if necessary

- As you sew, the needle should make a stitch first in one fabric strip, and then in the other.
- After stitching is completed, remove tissue and basting.

HONEYCOMB STITCH

Use the Honeycomb Stitch for smocking, mending and sewing stretch fabrics.



SMOCKING

Smocking is decorative stitching across evenly spaced gathers of fabric.

To Gather Fabric:

RECOMMENDED SETTINGS	
Stitch Selection:	Straight Stitch
Stitch Width:	
Stitch Length:	4
Foot:	Special Purpose (J)
Needle Plate:	General Purpose(A)

- Sew rows of straight stitches, 1/4" apart, across area to be smocked.
- Pull thread evenly, gathing fabric.
- Tie ends of every two rows of stitching together to hold gathers in place.
- Baste a backing to wrong side of fabric.

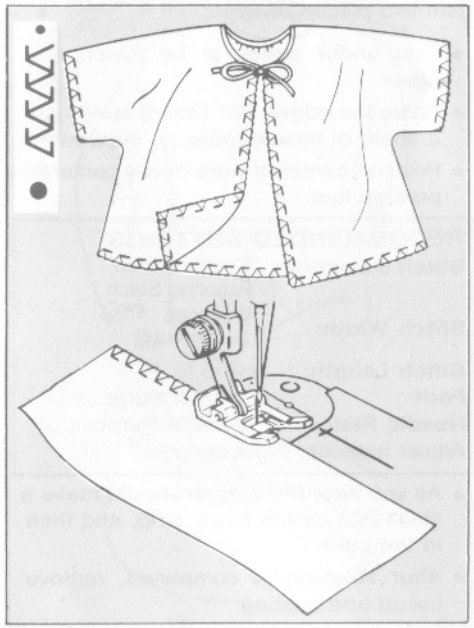
To Smock Fabric:

RECOMMENDED SETTINGS	
Stitch Selection:	Honeycomb Stitch
Stitch Width:	
Stitch Length:	3-1/2 to 4
Adjust balance, if necessary	

- Sew between rows of straight stitches.
- Pull out straight stitches when completed.

STRAIGHT FEATHERSTITCH

With the Straight Featherstitch you can stitch and finish a seam in one step. It is also ideal for edging and appliqueing.



EDGING

Add a delicate touch to your sewing while finishing and reinforcing your edges.

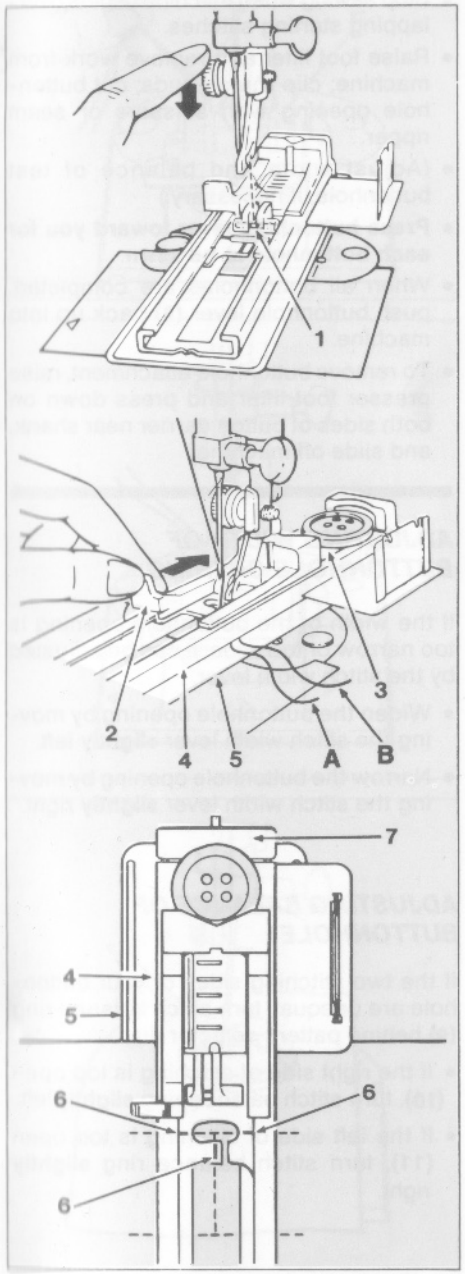
- Sew seams in usual manner and press.

RECOMMENDED SETTINGS	
Stitch Selection:	Straight Featherstitch
Stitch Width:	
Stitch Length:	3-1/2 to 4
Foot:	Special Purpose (J)
Needle Plate:	General Purpose (A)
Adjust balance, if necessary	

- Place edge of garment, right side up, under presser foot.
- Bulk of garment should be to the left.
- As you stitch needle should go over right edge of fabric, as shown.

SECTION 5 ONE-STEP BUTTONHOLING

- Your machine automatically makes a buttonhole to the size of your button in one, easy step. You never need to move the fabric or reposition the needle.
- Always make a practice buttonhole on a sample of your fabric.
- Be sure bobbin contains enough thread.
- When making buttonholes on hard-to-reach areas, convert machine bed to free arm sewing.
- Mark buttonhole position on fabric as indicated in pattern.



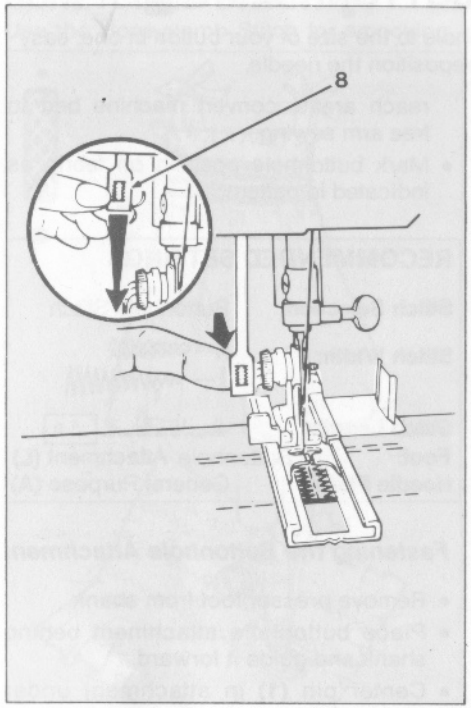
RECOMMENDED SETTINGS	
Stitch Selection:	Buttonhole Stitch
Stitch Width:	
Stitch Length:	0 1 2 3 4 0
Foot:	Buttonhole Attachment **(L)**
Needle Plate:	General Purpose **(A)**

Fastening the Buttonhole Attachment

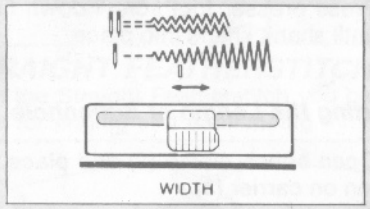
- Remove presser foot from shank.
- Place buttonhole attachment behind shank and guide it forward.
- Center pin **(1)** in attachment under shank, and lower presser foot lifter.
- Press presser foot screw down firmly until shank snaps into place.

Setting the Length of Buttonhole

- Open button clamp **(2)** and place button on carrier **(3)**.
- Slide clamp **(2)** back to hold button in place.
- Raise foot lifter and draw needle thread **(A)** and bobbin thread **(B)** between upper **(4)** and lower **(5)** plates of button attachment, and to the back of machine.
- Place fabric between upper and lower plates.
- Center 3 red guidelines **(6)** of attachment around beginning line of buttonhole.
- Lower presser foot lifter.
- Push foot from back of button carrier **(7)** toward you to insure proper buttonhole length.



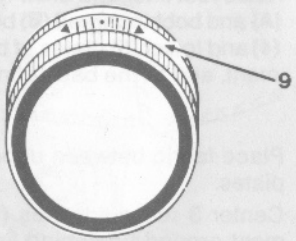
- Pull buttonhole lever **(8)**, located under sewing light, straight down as far as it will go.
- **Press it toward you.**
- Start running the machine.
- **The entire buttonhole will be stitched in one operation.**
- Stop sewing when machine begins overlapping starting stitches.
- Raise foot lifter and remove work from machine; clip thread ends; cut buttonhole opening with scissors or seam ripper.
- (Adjust width and balance of test buttonhole, if necessary.)
- **Press buttonhole lever toward you for each buttonhole to be sewn.**
- When all buttonholes are completed, push buttonhole lever **(8)** back up into machine.
- To remove buttonhole attachment, raise presser foot lifter and press down on both sides of button carrier near shank, and slide off machine.

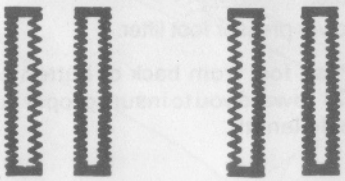


ADJUSTING WIDTH OF BUTTONHOLE OPENING

If the width of the buttonhole opening is too narrow or too wide, it can be adjusted by the stitch width lever.

- Widen the buttonhole opening by moving the stitch width lever **slightly** left.
- Narrow the buttonhole opening by moving the stitch width lever **slightly** right.





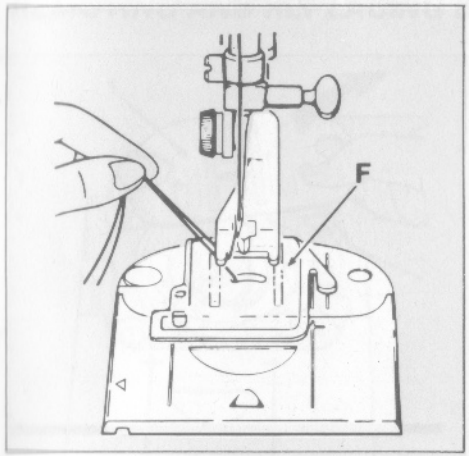
ADJUSTING BALANCE OF BUTTONHOLE

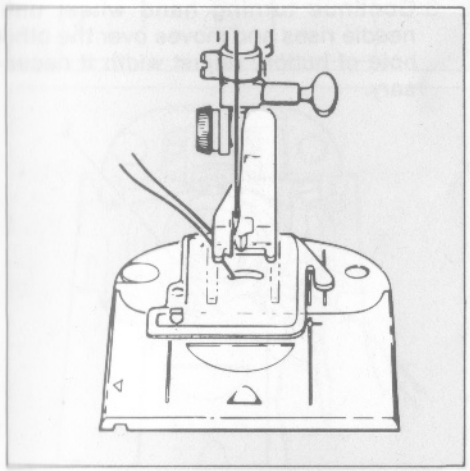
If the two stitching sides of your buttonhole are unequal, turn stitch balance ring **(9)** behind pattern selector dial.

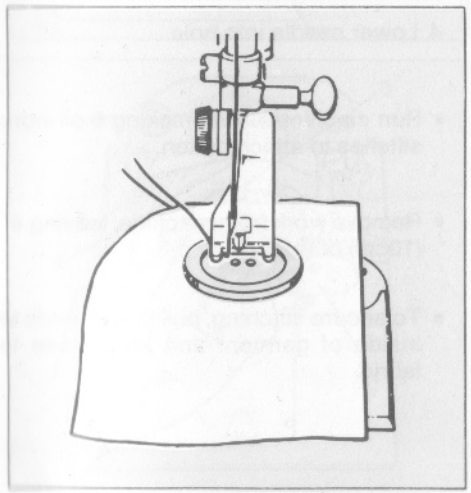
- If the right side of stitching is too open **(10)**, turn stitch balance ring **slightly** left.
- If the left side of stitching is too open **(11)**, turn stitch balance ring **slightly** right.

ATTACHING A BUTTON

Flat buttons can be sewn on quickly and easily using the plain zig-zag stitch







RECOMMENDED SETTINGS

Stitch Selection:	Zig-Zag Stitch
Stitch Width:	
Stitch Length:	0
Foot:	Button Sewing **(H)**
Needle Plate:	General Purpose **(A)**

Attach Feed Cover **(F)**

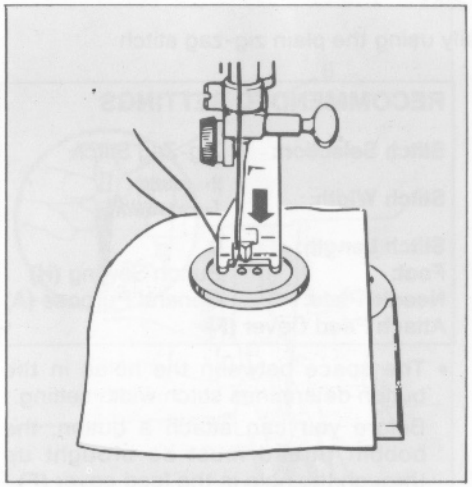
- The space between the holes in the button determines stitch width setting.

Before you can attach a button, the bobbin thread must be brought up through the hole in the feed cover **(F)**.

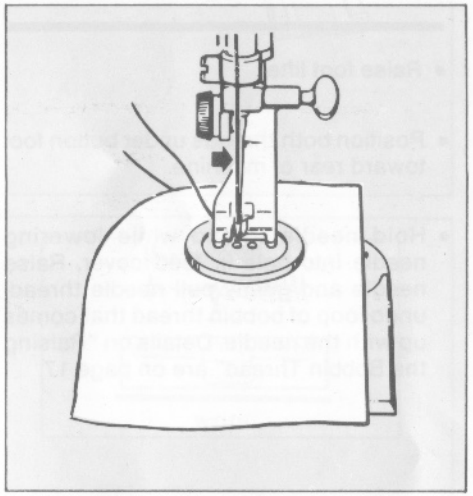
- Raise foot lifter.
- Position both threads under button foot toward rear of machine.
- Hold needle thread while lowering needle into hole in feed cover. Raise needle and gently pull needle thread, undo loop of bobbin thread that comes up with the needle. Details on "Raising the Bobbin Thread" are on page 17.

1. Place garment under button foot.

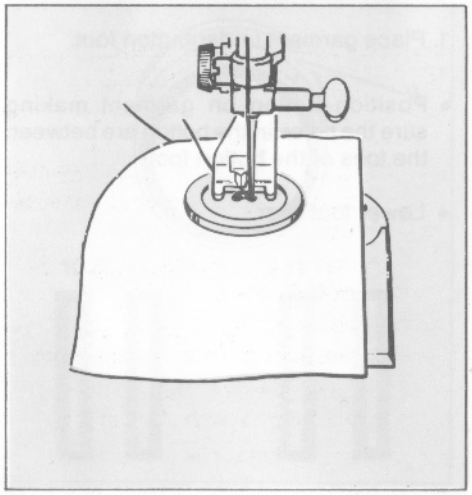
- Position button on garment making sure the holes in the button are between the toes of the button foot.
- Lower foot lifter.



2. Turn hand wheel toward you, lowering needle into either hole of button.



3. Continue turning hand wheel until needle rises and moves over the other hole of button. Adjust width if necessary.

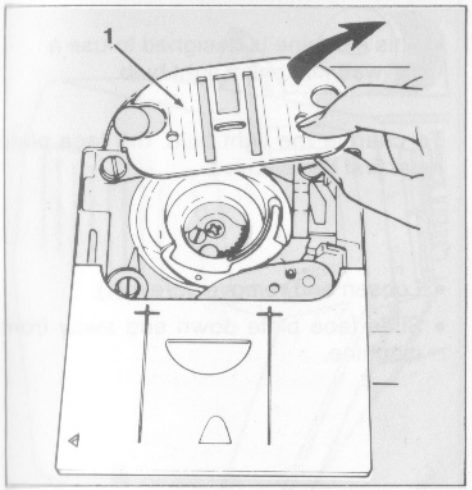


4. Lower needle into hole.

- Run machine **slowly** making 6 or more stitches to attach button.
- Remove work from machine, leaving 4" (10cm) of thread.
- To secure stitching, pull thread ends to inside of garment and knot close to fabric.

SECTION 6 CARING FOR YOUR MACHINE

REMOVING AND REPLACING BOBBIN CASE

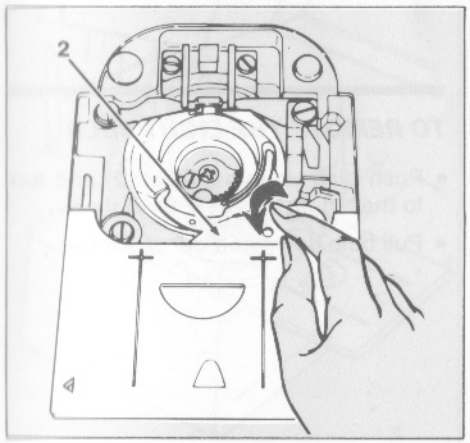


CAUTION: Before cleaning or adjusting the machine, remove plug from the socket outlet.

- Raise presser foot and needle.
- Open slide plate and remove bobbin.

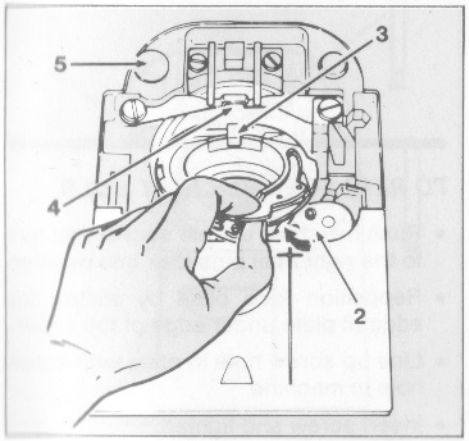
To remove the bobbin case, the needle plate must be removed first.

- Lift needle plate **(1)** from right corner and slide out from under foot.



TO REMOVE BOBBIN CASE

- Push lever **(2)** toward you until it stops, and hold in this position.
- Lift bobbin case up and guide it out toward you, as shown.



TO REPLACE BOBBIN CASE

- Push lever **(2)** toward you until it stops, and hold in this position.
- Guide bobbin case into place, making sure block **(3)** is all the way under metal bracket **(4)**.
- Return lever **(2)** to locking position **over top of bobbin case.**

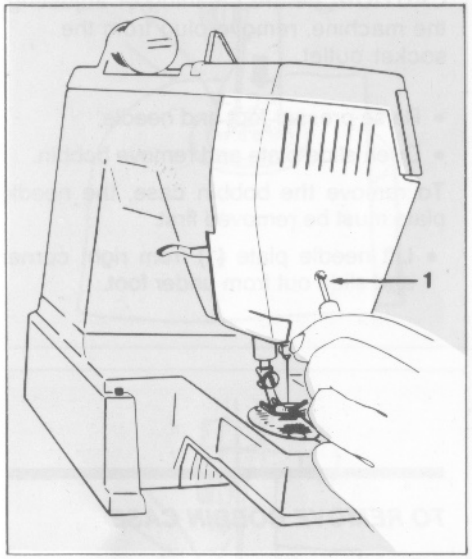
NOTE: After locking case in place, be sure it is **not tight**, but can **move slightly**.

- To replace needle plate, slide it under pin **(5)** and push it to the left.
- Press needle plate down in place.
- Insert bobbin and close slide plate.

REMOVING AND REPLACING LIGHT BULB

CAUTION:

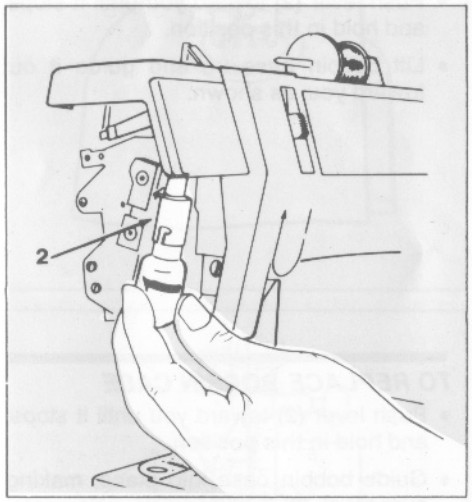
- Before changing light bulb, make sure you have removed plug from socket outlet. Be sure to replace the face plate which covers the light bulb before operating the machine.



- This machine is designed to use a 15-watt maximum light bulb.

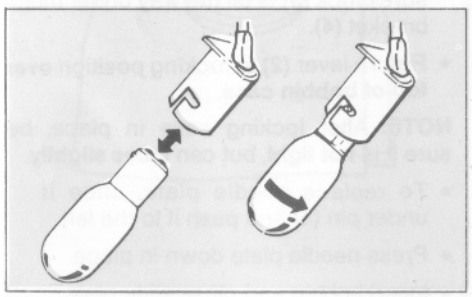
To change the light bulb, the face plate must first be removed.

- Loosen and remove screw **(1)**.
- Slide face plate down and away from machine.



TO REMOVE THE LIGHT BULB

- Push bulb up into socket **(2)** and turn to the left to unlock bulb pins.
- Pull bulb down and out of socket.

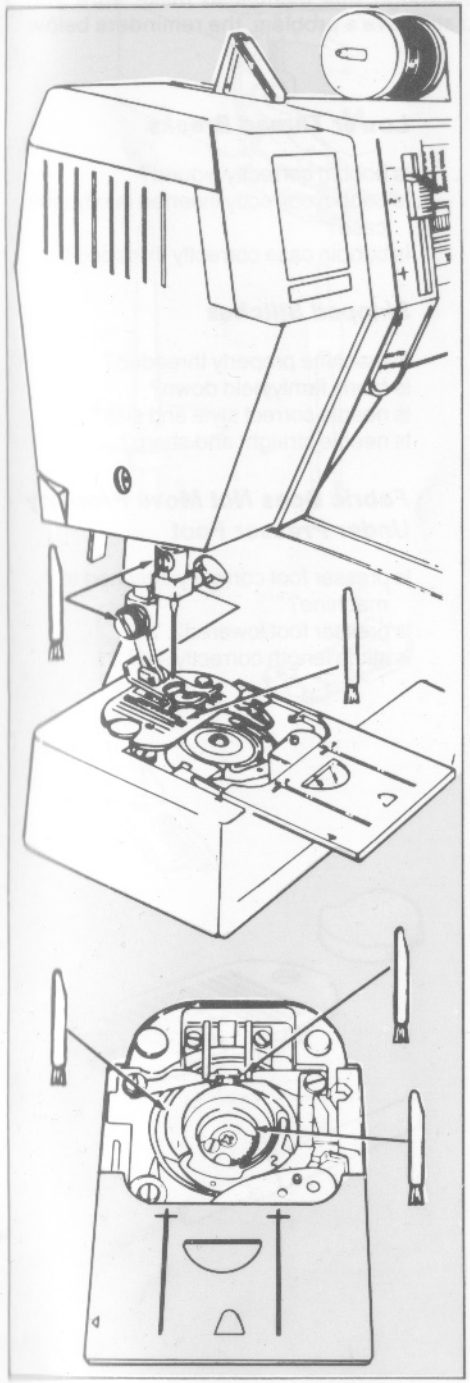


TO REPLACE THE LIGHT BULB

- Push new bulb up into socket and turn to the right until pins lock into position.
- Reposition face plate by sliding top edge of plate under edge of top cover.
- Line up screw hole in plate with screw hole in machine.
- Insert screw and tighten.

CLEANING THE MACHINE

Your machine is designed to give you many years of dependable service. To ensure this reliability, take a few minutes to keep the machine clean. How often you clean it depends on how often you use it.



- Using the lint brush, remove lint or dust from:
  - — presser bar
  - — needle bar
  - — machine surface (if necessary, dampen a soft cloth and use a mild soap to clean the surface)

- Remove needle plate as instructed and clean exposed area with a lint brush.
  - — bobbin case (if there is a lot of lint in this area, remove the bobbin case for cleaning)

PERFORMANCE CHECKLIST

When sewing difficulties occur, look back through this manual to make sure you are correctly following the instructions. If you still have a problem, the reminders below may help you to correct it.

Needle Does Not Move

Is machine connected to electrical supply?
Is the power and light switch on?
Is controller connected?
Is air supply from controller clear?

Needle Moves But Stitch Is Not Formed

Is needle defective?
Is needle fully inserted into needle clamp?
Are bobbin and needle correctly threaded?
Is bobbin correctly inserted into bobbin case?

Needle Breaks

Is needle straight and sharp?
Is needle correct size?
Is needle fully inserted into needle clamp?
Are controls properly set?
Are accessories correct for application?

Bobbin Winding Difficulties

Is thread unwinding freely from spool?
Is bobbin winder engaged?
Is thread end securely held at start of wind?

Upper Thread Breaks

Is machine properly threaded?
Is thread freely unwinding from spool?
Is proper spool cap being used?
Is needle correct size for thread?
Is upper thread tension too tight?
Is bobbin case properly inserted?
Is bobbin rim free of nicks?

Lower Thread Breaks

Is bobbin correctly wound?
Is bobbin correctly inserted into bobbin case?
Is bobbin case correctly threaded?

Skipped Stitches

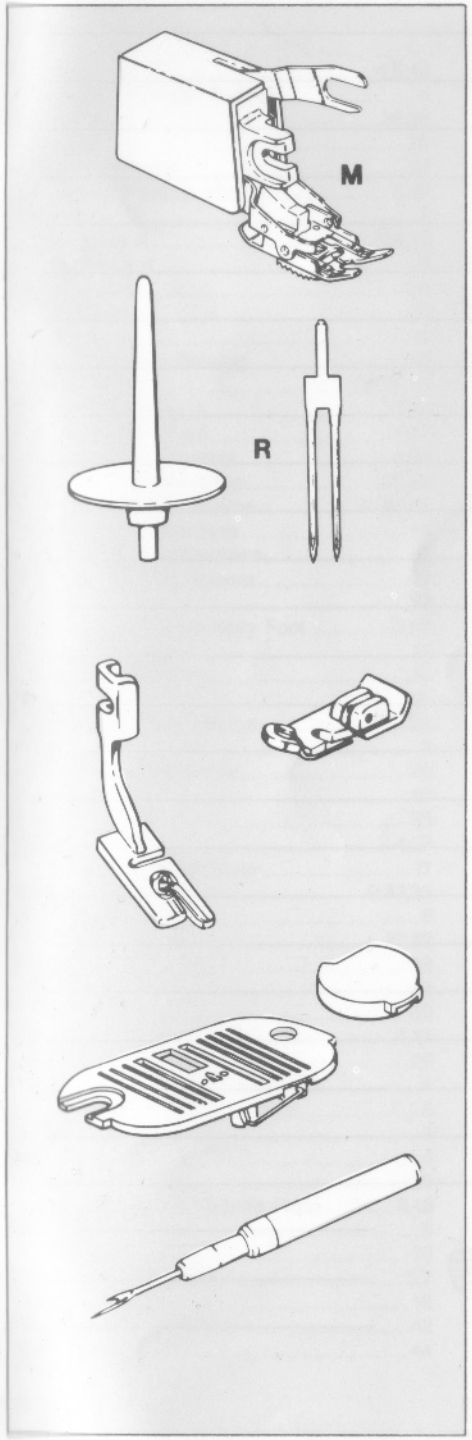
Is machine properly threaded?
Is fabric firmly held down?
Is needle correct style and size?
Is needle straight and sharp?

Fabric Does Not Move Properly Under Presser Foot

Is presser foot correctly attached to machine?
Is presser foot lowered?
Is stitch length correctly set?

ADDITIONAL ACCESSORIES

Additional Accessories for your sewing machine are available at your sewing center.



Even Feed Foot (M) is used for sewing hard-to-feed pile, stretch and bonded fabrics. Also excellent for plaids, stripes and topstitching.

Twin Needle and Spool (R) are used for decorative twin needle (2 threads) stitching on woven and knit fabrics.

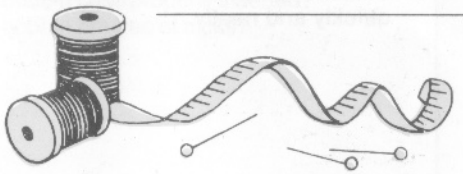
Overedge Foot, use with Overedge Stretch Stitch for seams in stretch fabrics.

Narrow Hemmer Foot is used to stitch a narrow hem in a single operation.

Chainstitch Fittings, use for sewing temporary hems, basting and making a thread chain.

Seam Ripper, use to pick and cut threads quickly and neatly.

PERSONAL NOTES



INDEX

Accessories....4,5,43
Accessory Storage, Built-In....4
Balance....25,36
Basting....20
Blindstitch Hems....27
Blindstitch Presser Foot....5,27
Bobbin....5
  Winding A....14,15
  Inserting A....16
Bobbin Case....39
  Removing....39
  Cleaning....41
Bobbin Thread, Raising....17
Border Design....30,31,34
Button, Attaching A....37,38
Button Sewing Foot....5,37
Buttonhole Attachment....4,35
Buttonholing, One-Step....35,36
Caring for Your Machine....39,40,41
Cleaning The Machine....41
Connecting The Machine....7
Corners, Turning Square....21
Darning....22
Darning and Embroidery Foot....5,22
  Attaching Foot....11
Decorative Stitches....30
Edging....34
Embroidery, Free Motion....22
Fabrics....8
  Placing Under Foot....20
Face Plate....40
Fagoting....33
Feed Cover....4,37
  Attaching Feed Cover....11
Free-Arm Sewing....9,33,35
Handle Storage....8
Hemstitching....27,32
Lace Trim....28
Light Bulb....40
  Replacing....40
Lint Brush....4,41
Monogramming....26
Needles....5
  Selecting....8
  Changing....9
Needle Plate....4
  Changing....39
  Straight Stitch Needle Plate....5,18
Needle Threader....5
  Attaching....13
Operating The Machine....6,7
Pattern Selecting....18
Performance Checklist....42
Personal Notes....44
Presser Feet....4,5
  Changing....10,11
  General Purpose....4
  Special Purpose....5
  Straight Stitch....4,18
Presser Foot Lifter....20
Presser Foot With Shank....5
  Changing....11
Principal Parts....2,3
Reverse Stitching....20
Satin Stitching....26
Seams:
  Curved....22
  Finishes....26,32
  Keeping Straight....21
  Overedge Seam....31
  Sewing A Seam....20
Seam Guide....5,21,20
Smocking....34
Special Stitches....24
Spool Caps....4,12
Stitch Patterns:
  Arrow Stitch....30
  Blind Stitch....27
  Booerang Stitch....31
  Bunting Stitch....30
  Chinese Dynasty Stitch....29
  Crescent Stitch....29
  Crown Stitch....33
  Domino Stitch....30
  Fagoting Stitch....33
  Flag Stitch....30
  Honeycomb Stitch....34
  Kite Tail Stitch....29
  Lady Bug Stitch....31
  "M" Stitch....28
  Multi-Stitch Zig-Zag....28
  Rampart Stitch....31
  Ric-Rac/Straight Stretch Stitch....33
  Satin Bead....31
  Straight Featherstitch....34
  Straight Stitch....18
  Stretch Overedge Stitch....31
  Turkish Stitch....32
  Zig-Zag Stitch....26
Stitch Length....18,24,35
Stitch Width....24,36
Tears, Mending....28
Tension....19,25
Thread....8
Threading The Machine....12
Topstitching....33
Zipper Foot....4,23
Zipper, Inserting A....23